

VITAL TRUMPET EXCERPTS ONLINE

by

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Introduction

The study of orchestral excerpts is a staple of the classical trumpet student's regular practice regimen. Trumpet students of every variety will usually become familiar with these orchestral snippets during their training. Fortunately for the modern-day student, a wealth of publications and traditional educational materials are available to assist in their study.

The tradition of gathering demanding orchestral excerpts dates back to the late nineteenth century.¹ The practice has continued into the twenty-first century with the availability of multivolume publications, both written and oral commentary, complete parts from selected repertoire, audio demonstrations, and a basic website with standard excerpts with audio examples.² Some contain passages for one part alone and others consist of multipart scores, or a mixture thereof depending on an excerpt's instrumentation.

Despite the numerous publications, pedagogues often bemoan editorial errors found in major excerpt compilations. Students can become frustrated at discrepancies in the books that they purchased on a limited budget. Despite the occasional glitch and quirk, the rich variety of publications has been – and continues to be – beneficial to teachers and students. However, the vast majority of the excerpt market is confined to a

¹ James Boldin, "History of Orchestral Excerpt Collections – James Boldin's Horn World," accessed June 9, 2016, <https://jamesboldin.com/2010/08/26/history-of-orchestral-excerpt-collections/>.

² "www.TrumpetExcerpts.org - Your Online Source for the Study of Orchestral Trumpet Literature," *Trumpet Excerpts*, accessed June 9, 2016, <http://www.trumpetexcerpts.org/>.

pre-Internet Age model. “Vital Trumpet Excerpts Online”³ aims to serve as an upgraded pedagogical paradigm compatible with the learning behaviors and expectations of twenty-first century students. This paradigm takes advantage of the technology that modern-day students and teachers have available to them, often in their backpack or pocket in the form of a tablet or smart device.

This project consists of two main components: (a) an offline version of an extensive excerpt website; and (b) this document which discusses the following aspects of the project:

- The value of an Internet-based resource of excerpts
- Current excerpt websites for orchestral brass with special focus on the trumpet
- A discussion of an evolvable excerpt website able to be efficiently updated, expanded, and serve as a repository and hub of excerpt based tools, resources, and commentary
- An overview of data determination and content assemblage methods used to form the website’s content
- A brief discussion of copyright issues as they pertain to an educational not-for-profit website
- A “non-techie” overview of the technical methods used to construct the offline version of the website
- A presentation of statistics compiled during the course of source collection

³ From this point on, “Vital Trumpet Excerpts Online” will be referred to by its acronym VTEO.

- An introduction to the learning aids available in the offline version along with a discussion of the potential aids made possible in an online version
- Appendices presenting a “semi-techie” overview of the project architecture and design, followed by a full listing of acquired data statistics

The adjective in the project’s title – "Vital" – is a summary of the goals of this offline media project and its subsequent online website: to provide a dynamic and thriving web-based resource of orchestral trumpet excerpts and related information that is capable of growing and evolving with developing trends in online-learning.

Chapter 1: JUSTIFICATION AND OVERVIEW

“The Internet has spawned the expansion of innovative learning technologies, particularly software.”¹ There is a growing foundation of educational software and web-based tools. According to Apple, its popular iOS App Store alone boasts 80,000 apps in the “Educational Category.”² That number is in addition to educational tools for personal computers, various manufacturers’ mobile learning apps for children, online college courses, career training, and even military level simulation software. A large amount of this educational software is offline. However, since the advent of the Internet and the proliferation of its accessibility, more and more users are able to access educational tools remotely, often without the need of purchasing potentially cost-prohibitive software. At the moment of writing this paragraph, there are 3,152,438,874 Internet users worldwide.³ This number increases by the second. Online-based educational materials have the potential of reaching an immense number of learners. These learners are a major target audience in all fields, including music pedagogy.

VTEO aims to provide students with a solid base of orchestral material that will support their understanding of the repertoire and styles. In this sense, it serves the same function as excerpt publications already available. It differs by having the flexibility and

¹ Carol Diane Wysocki, “A STUDY OF COGNITIVE ENGAGEMENT IN ONLINE LEARNING” (Washington State University, 2007), 2.

² “iPad in Education,” Web Page, *iPad in Education*, accessed June 27, 2015, <https://www.apple.com/education/ipad/apps-books-and-more/>.

³ “Internet Users,” Web Page, *Internet Live Stats*, accessed June 27, 2015, <http://www.internetlivestats.com/internet-users/>.

features of an online medium. The following presents some of the benefits of a web-based tool:

- Materials are available globally, as long as an Internet connection is available.
- Easy access is available on any device that has a modern web browser.
- Content that is edited and uploaded to the site is immediately available to the user.

There is no need to wait – sometimes indefinitely – for an “errata.”

- Related material can easily be associated with an excerpt. These could include audio, video, commentary, and links to external sources, such as IMSLP⁴ with full legal scores and parts.

At the time of this document’s writing, a site entitled www.TrumpetExcerpts.org⁵ is available. This is a useful resource, which presents a good selection of standard orchestral excerpts. The site consists of the following features:

- A collection of excerpts from 62 works by 26 composers
- Audio samples for each excerpt
- A structural model in the style of www.hornexcerpts.org⁶ and www.tromboneexcerpts.org⁷ (excerpt images with associated audio)

⁴ “IMSLP/Petrucci Music Library: Free Public Domain Sheet Music,” accessed June 9, 2016, <http://www.imslp.org/>.

⁵ “www.TrumpetExcerpts.org - Your Online Source for the Study of Orchestral Trumpet Literature.”

⁶ “Horn Excerpts Home - IHS Online,” accessed June 20, 2016, <https://www.hornsociety.org/hornexcerpts-org>.

⁷ “TromboneExcerpts.org by Seth T. Vatt,” accessed June 20, 2016, <http://www.tromboneexcerpts.org/>.

- A “Copyright Questions” page⁸ linking to the “U.S. Copyright Office Fair Use Index” page of the United States Copyright Office, under which the site claims legal protection

In effect, www.TrumpetExcerpts.org satisfies the benefits of an online resource as detailed above, with the exception of not including some related materials, such as video, commentary, and links to external resources. The following sections state how VTEO takes the concept of www.TrumpetExcerpts.org (and its horn and trombone counterparts) and builds upon it.

Static vs. Dynamic Websites

The existing horn, trombone, and trumpet excerpt sites are known as *static websites*. This doesn’t signify an inability to change content over time, but is instead a technical term. TechTerms, an online dictionary of technical terms, states:

A static website contains Web pages with fixed content. Each page is coded in HTML and displays the same information to every visitor. Static sites are the most basic type of website and are the easiest to create. Unlike dynamic websites, they do not require any Web programming or database design. A static site can be built by simply creating a few HTML pages and publishing them to a Web server.

Since static Web pages contain fixed code, the content of each page does not change unless it is manually updated by the Webmaster. This works well for small websites, but it can make large sites with hundreds or thousands of pages difficult to maintain. Therefore, larger websites typically use dynamic pages, which can be updated by simply modifying a database record. Static sites that contain a lot of pages are often designed using templates. This makes it possible to update several pages at once, and also helps provide a consistent layout throughout the site.⁹

⁸ “Copyright Questions,” *Trumpet Excerpts*, accessed June 20, 2016, <http://www.trumpetexcerpts.org/copyright-questions.html>.

⁹ “Static Website,” Online Dictionary, *TechTerms.com*, last modified June 2009, accessed June 30, 2015, <http://techterms.com/definition/staticwebsite>.

Website developers quickly realize the limitations of a static website once the initial content has been uploaded, especially if there is a large amount of pages. In the case of www.TrumpetExcerpts.org, 62 pieces translates to at least 62 pages. If the website needs to be updated at a structural level, such as the addition of a new resource type (i.e., a commentary feature, embedded videos, etc.), each page would need direct recoding to present the content, *and* to provide some sort of container to hold the new type of content. Editing hundreds of pages just to include a single new feature can be very time-consuming and in turn discourage the Webmaster from creating any new features at all.

More important are the benefits that a *dynamic website* can offer in addition to those of a static site, let alone the benefits of a traditional paper-based publication.

TechTerms defines a dynamic website as the following:

Dynamic websites contain Web pages that are generated in real-time. These pages include Web scripting code, such as PHP or ASP. When a dynamic page is accessed, the code within the page is parsed on the Web server and the resulting HTML is sent to the client's Web browser.

Most large websites are dynamic, since they are easier to maintain than static websites. This is because static pages each contain unique content, meaning they must be manually opened, edited, and published whenever a change is made. Dynamic pages, on the other hand, access information from a database. Therefore, to alter the content of a dynamic page, the Webmaster may only need to update a database record. This is especially helpful for large sites that contain hundreds or thousands of pages. It also makes it possible for multiple users to update the content of a website without editing the layout of the pages [...]¹⁰

¹⁰ "Dynamic Website," Online Dictionary, *TechTerms.com*, last modified June 2009, accessed June 30, 2015, <http://techterms.com/definition/staticwebsite>.

Applying the real-time flexibility of a dynamic website allows for the following additional features to be available in an orchestral excerpt resource:

1. Easy maintenance: If a user reports an error, the correction can be applied within minutes instead of hours or days, if at all. The addition of an excerpt would be as simple as adding a new image with related materials to a database.
2. Real-time statistical reporting: When a new excerpt is added, updated statistics are immediately available. This can include numbers such as the popularity of a given work or excerpt on audition lists gathered over time.
3. Dynamic functionality: Instead of limiting the site's function to a static presentation, the use of an online database allows for a "user-base." A user-based system would allow for the following:
 - a. Visitors can have a personal account where they can log their progress and maintain a record of notes.
 - b. Respected experts in the orchestral trumpet community could contribute their insights for any given excerpt. Excerpts could present multiple commentaries – an invaluable resource for students.

As previously mentioned in the Introduction, this media project serves as a foundation for an online dynamic website. It serves to form a solid foundation consisting of: (a) an expansive set of orchestral excerpts; (b) the benefits mentioned in items one and two found in the list above; and (c) the benefits of a static website. Due to issues of content permanency, this foundational phase is limited to a "pseudo-dynamic" site.

Chapter 4 presents a basic "non-techie" overview of the implementation considerations

taken to create a pseudo-dynamic site that is easily converted to an online resource.

Appendices 1 and 2 cover an overview of the file and database structure.

Selection of Excerpts

Chapter 3, titled “Methodology Part 1, Content Assemblage,” discusses in detail the process of deciding which excerpts to include in the foundational stage of VTEO. The resulting collection of excerpts represents a total of 40 composers, 110 works, and 311 passages.¹¹ This is a substantial increase to the 26 composers and 62 pieces found on www.TrumpetExcerpts.org.

Auxiliary Excerpt Resources

All of the current brass excerpt websites include audio samples with each excerpt. Chapter 3, titled “Interlude: A Note on Copyright Issues,” discusses the legal ramifications of the online inclusion of audio samples and presents a solution to stay in full compliance with the law. In short, VTEO leverages the massive amount of video on YouTube, by embedding videos of professional performances in place of extracted audio. In addition to video, the site provides:

- Links to full scores and parts maintained by the IMSLP Petrucci Music Library¹² for works that are in the Public Domain
- Basic orchestral audition list statistics demonstrating how often a specific passage, excerpt, and work are requested on these lists¹³

¹¹ See Appendix 3 for a full statistical report of excerpt content included.

¹² “IMSLP/Petrucci Music Library: Free Public Domain Sheet Music.”

¹³ See “Methodology Part I” for a discussion of the audition list selection process.

Website Design Considerations

VTEO follows the basic fundamental design concepts that are used by hornexcerpts.org, tromboneexcerpts.org, and trumpetexcerpts.org. A list of works directs users to pages that contain a desired work and its passages. The site adds the option to list the navigation by composer, work, or even by gathered audition lists. This feature is simply a convenience that allows a user some flexibility in finding a work. In addition to this navigation, a separate menu system provides the user with links to a non-exhaustive set of auxiliary resources, such as orchestral excerpt publications and related research. VTEO aims to be user-friendly, intuitive, and able to accommodate a wide range of visitors.

Will Anybody Use It?

The question may be asked, “but would anybody really use an excerpt website?” Dr. Ericka Tyner-Grodrian has successfully developed a similar resource for horn focused specifically on excerpts from the operatic repertoire. 161 horn professors in the United States of America completed an online survey where 93%¹⁴ of the respondents stated:

“[...] they would indeed use an opera excerpt website of this nature, barring certain previously mentioned limitations like student ability-level and time constraints. Many of them also referenced the success of Daren Robbins’ “Orchestral Horn Excerpts” website, and suggested that an opera website of similar design would be most useful for their students. Most reasoning provided by professors for the potential practicality of this kind of resource was rooted in one of two places: a belief that today’s students have a strong preference for

¹⁴ Ericka Tyner Grodrian, “Horn Opera Excerpts: A Suggested Addition to Current American Horn Pedagogy” (D.M.A. Thesis, Indiana University, 2011), 3.

online and/or digital media, and the concern that most opera excerpts [...] can be difficult to acquire.”¹⁵

The remaining 7% of respondents “claimed they were unlikely to use a website of this nature because, “Opera gigs come up rarely,” or because they simply do not have students who are interested and/or capable of performing in this genre.” Tyner-Grodrian concludes that the usefulness of a web resource *per se* wasn’t questioned, rather the usefulness of teaching opera excerpts in general.¹⁶ The number of visits to the current brass excerpt websites confirms the essence of her study. The online web statistics tool “SimilarWeb”¹⁷ approximates various site statistics. Table 1.1 shows SimilarWeb’s results for those sites during the month of April, 2016. This data clearly shows a demand for online excerpt resources.¹⁸

Table 1.1. Common excerpt site visits in April 2016

Site URL	Visits
http://www.tromboneexcerpts.org	15,000
https://www.hornsociety.org/hornexcerpts-org	40,000
http://www.trumpetexcerpts.org	7,000

A Technical Disclaimer

VTEO is somewhat unique in the fact that the website isn’t constructed using a “Content Management System,” such as WordPress, Drupal, or Joomla. It also avoids using template-based tools such as Wix and Weebly. These are all wonderful and

¹⁵ Ibid., 21–22.

¹⁶ Ibid., 22.

¹⁷ “Similarweb.com - Digital World Market Intelligence Platform,” *SimilarWeb.com*, accessed June 22, 2016, <https://www.similarweb.com/>.

¹⁸ The amount of visits to hornexcerpts.org reflects the visibility of being on the International Horn Society’s website.

powerful tools. However, for a dynamic and highly customized tool such as VTEO, a “code-from-the-ground-up” approach is required. Because of this ground-up approach, sections of this document are devoted to technical aspects and construction of the media component. The author avoids delving into the nuts-and-bolts, but does make reference to developmental software and tools. Whenever a technical discussion is impending, the reader is forewarned! It is however the hope of the author that the occasional technical discussion will offer the reader some insight into the process of developing a fully customizable and dynamic online resource.

Summary of Justification

This chapter has presented an overview of: (a) technical advancements; (b) content expansion; (c) design improvements; and (d) the importance of providing a new orchestral excerpt website that provides trumpet students and educators a legal way to access music and performances. Vital Trumpet Excerpts Online will serve as a substantial, user-friendly, and dynamic resource that is able to evolve with the needs of educators and those becoming familiar with the orchestral repertoire. It will be in full legal compliance. It hopes to be a valuable tool for students and educators for years to come.

Chapter 2: METHODOLOGY PART I, CONTENT ASSEMBLAGE

The construction of VTEO is based on three principal functions: (a) audition list compilation; (b) content determination and generation; and (c) database and software development. These three phases of construction greatly influenced each other. Phases (a) and (b) significantly defined the requirements of the developmental phase. This chapter covers the first two non-technical phases of production. Chapter 4, “Methodology Part 2, Technical Aspects” presents a non-technical explanation of the developmental phase.

Audition List Compilation

In order to determine which excerpts to include, a study of which ones were requested during auditions for major American orchestras over the span of ten years (2003 to 2013) was conducted. In order to form a workable base, the excerpts included on these orchestras’ audition lists were classified as “vital.” Other works not included in the study are indeed found in several publications and considered valuable musical material. As an example, selections from the opera repertoire are called for in auditions for opera companies, but don’t appear nearly as often in auditions for orchestras in the United States of America.^{1,2} The intent of this media project is not to provide a thoroughly exhaustive collection of excerpts, but to form a substantial foundation that will serve as a springboard for further online expansion.

¹ David Amlung, “Opera Excerpts for Trumpet: A Guidebook for Auditions,” 2014, accessed June 17, 2016, <https://scholarworks.iu.edu/dspace/handle/2022/19193>.

² “Horn Opera Project - Home,” accessed June 17, 2016, <http://hornoperaproject.org/>.

The orchestras to include in the audition material search were determined by querying the League of American Orchestras' "Organization Directory."³ Ensembles that were in the directory in 2013 and listed under the "Meeting Group Category" of "Group 1" were included in the search. The query resulted the orchestras listed in table 2.1.

Table 2.1. Orchestras included in audition list search

Atlanta Symphony Orchestra	National Symphony Orchestra
Baltimore Symphony Orchestra	New York Philharmonic
Boston Symphony Orchestra	Pittsburgh Symphony Orchestra
Chicago Symphony Orchestra	San Diego Symphony
Cincinnati Symphony Orchestra	San Francisco Symphony
Dallas Symphony Orchestra	Seattle Symphony
Detroit Symphony Orchestra	St. Louis Symphony
Houston Symphony	The Cleveland Orchestra
Indianapolis Symphony Orchestra	The Philadelphia Orchestra
Los Angeles Philharmonic	The Saint Paul Chamber Orchestra
Milwaukee Symphony Orchestra	Utah Symphony / Utah Opera
Minnesota Orchestra	

The International Musician was consulted to locate trumpet position openings from 2003 to 2013. Each volume was scanned for openings in the orchestras listed in table 2.1. Table 2.2 lists the postings found.

Table 2.2. Orchestral trumpet job postings from 2003 - 2013⁴

Year	Orchestra	Position	Season
2003	Chicago	Principal	Fall
	Colorado	Principal	Sep

³ "Search - Organization Directory," accessed June 20, 2016, <https://my.americanorchestras.org/eweb/DynamicPage.aspx?Site=League&WebKey=18a248d9-7799-42fd-a604-7fa7ff76e502>.

⁴ A heartfelt thanks to Dr. David Hunsicker, Dr. Heather Victoria-Rodabaugh, Justin Bartels (Colorado Symphony, principal trumpet), and numerous orchestra personnel managers for their assistance in tracking down these audition lists.

Year	Orchestra	Position	Season
	Dallas	Associate/Third	Apr
	Saint Louis	Second	Spring
	San Francisco	Associate Principal	Spring
	Utah	Associate Principal	Fall
2004	Baltimore	Second	Jan
	Chicago	Principal	Sep
	Dallas	Associate/Third	Spring
	Dallas	Principal	*
	Houston	Principal	Spring
	Indianapolis	Third/Assistant Principal/Utility	Spring
	New York	Associate Principal	Spring
2005	Atlanta	Associate Principal/Third	Spring
	Cleveland	Fourth/Utility	Oct
	Colorado	Principal	May
	Los Angeles	Second	Oct
	National	Second	Jan
	Oregon	Principal	Fall
	San Diego	Substitute Principal	Fall
	San Francisco	Principal	May-Jun
2006	Atlanta	Principal	May
	Boston	Principal	Jan-Feb
	Houston	Principal	Spring
	Los Angeles	Second	Nov
	New York	Associate Principal, Third/Second ***	Spring
2007	Atlanta	Associate Principal	Sep
	Baltimore	Second	Spring
	Boston	Assistant Principal/Third	Oct-Nov
	Colorado	Principal	Nov
	Colorado	Principal	June
	New York	Second	*
	San Francisco	Principal	Jan
2008	Boston	Assistant Principal/Third	Oct
	Cincinnati	Principal	Jan
	Colorado	Principal	May
	Oregon	Third/Utility	Sep
	San Francisco	Principal	Feb
2009	Baltimore	Second, Fourth/Substitute	Sep
	Boston	Assistant/Third	Oct

Year	Orchestra	Position	Season
	Cleveland	Assistant Principal	Jan
	Indianapolis	Principal	Jan-Feb
	St. Louis	Principal	Jan-Mar
2010	Atlanta	Associate Principal/Utility	Mar
	Atlanta	Second/Utility	Jun
	Boston	Second	Jan-Feb
	Detroit	Principal	May-Jun
	San Francisco	Third	Jan-Feb
	San Francisco	Third	Oct
	St. Louis	Principal	Jan-Mar
2011	Detroit	Principal	Nov
	Los Angeles	Principal	*
	Los Angeles	Third/Utility	Jan
	National	Principal	Summer
	San Diego	Third	Dec
	St. Louis	Principal	Spring
2012	Atlanta	Principal	Feb-May
	Detroit	Principal	*
	Indianapolis	Principal	Feb-Mar
	National	Principal	Summer
	San Francisco	Second	May-Jun
	Utah	Principal	Sep
2013	Atlanta	Principal	Jay-Jun
	Baltimore	Second	Mar
	Milwaukee	Associate Principal/Third	Jan
	San Diego	Principal	May-Jun
	San Francisco	Associate Principal	Jan

* = season not specified

** = list not found

*** = multiple openings on one list

The following steps were taken to locate these lists: (a) An online search of lists posted on the Internet (this achieved the fewest results); (b) A general call for audition

lists from the Trumpet Herald online forum⁵ (this achieved the most results thanks to the generous assistance of Dr. David Hunsicker and Justin Bartels); and (c) contacting personnel managers requesting the remaining lists. The process returned a total of 53 audition lists out of a total of 66 announced openings in the International Musician.⁶ A more insistent search may have resulted in a few of the missing 13 lists, but for the intent of the project, a sampling of 53 lists is sufficient.

Initial Content Determination

From the acquired lists, a thorough examination of the requested repertoire helped decide the project's content. Determining which passages to include in VTEO was initially a messy process that gradually coalesced into a systematic approach. The project could have simply referred to major orchestral excerpt publications for a selection of commonly called for passages. Instead of taking this route, the acquired audition lists were the sole source for choosing excerpts. A simple database of passages was created to represent what was found on the first handful of lists that had been acquired. As more and more lists from different orchestras arrived, it quickly became apparent that a simple one-to-one system (one audition list entry per database record) would not work. The variety in which the lists were presented required a flexible data structure to handle the different kinds of entries. For example, the Boston Symphony's 2009 list for "Assistant Principal /

⁵ "View Forum - Orchestral/Chamber Music/Solo: Trumpet Herald Forum," *TrumpetHerald.com*, accessed June 20, 2016, <http://www.trumpetherald.com/forum/viewforum.php?f=4&sid=b3295688b2414142909e12a925c08249>.

⁶ See "Chapter 6: By the Numbers – Statistics" for a listing of the missing audition lists.

3rd Trumpet” has an entry that appears as “Ravel, Piano Concerto in G” – the work in its entirety. Of course, this demonstrates the importance of knowing the entire work while preparing for an audition! However, for a website that includes specific passages that are often considered “challenging” or “defining” trumpet moments, listing the *entire work* doesn’t work for an *excerpt* website. Continuing further down the same list, “Gershwin, Concerto in F – 2nd Movement” appears. This time, the work along with a specific *movement* is specified. Any student who has studied the piece knows the defining trumpet passages in the second movement. But again, it doesn’t help the cause of an *excerpt* website. Finally, on the same list, a specific *passage* is requested: “Copland, An Outdoor Overture – 1 m. after [15] – [35].” A specific entry like this one is very precise and makes the technical construction of the website much easier. However, the system takes into account the variety of entry styles, which are:

- Entire work
- Entire movement(s)
- Specific passage
 - Passages with different measure numbers, though the actual musical content is identical
 - Passages with different musical content, whether by a few measures or entire sections

Why bother with differentiating between the different entry types? In the case of this project, it helps determine some interesting large and small-scale statistics. For example,

how often is Ravel's Piano Concerto in G called for in its entirety?⁷ How often is the opening muted passage included in lists? Or how often are both sections of the Waltz called for in Stravinsky's Petrouchka?⁸ However, for somebody who just wants to practice some excerpts, this granularity of entry variety has little to no importance. The visitor wants to see a link to the piece, which then displays a collection of pertinent passages. In the case of this project, the statistics serve as an interesting side-note.⁹ The website presents a snapshot of the statistical information presented in this document, while still maintaining the user-friendly interface a visitor needs to enjoy practicing some excerpts.

Specific excerpt selection for statistics and website inclusion

With a viable solution in place, each list was entered into a database along with its entries.¹⁰ Entries with different measure labels were merged.¹¹ Finally, all similar passages that weren't quite the same were examined to determine what the visitor would actually see on the site. For example, in the case of the Ravel Piano Concerto in G major,

⁷ Of course, audition committees expect the individual who is auditioning to know what the highlights of any given work are, and will likely request those passages, but by leaving the entry vague has the ability to request any passage in the work.

⁸ These statistics are located in Chapter 6: Totals and Statistics

⁹ Maintaining the data flexibility to allow for these statistics was a mental exercise in database architecture. Admittedly, the outcome, though somewhat interesting, seems trivial in comparison to the benefits of easily accessible notation and video.

¹⁰ For an explanation of the solution and data-entry process, see "Chapter 4: Methodology Part II, Technical Aspects" as well as "Appendix 2: Database Architecture"

¹¹ As an example, one list might call for 3 measures before rehearsal [K] in a hypothetical piece, whereas another list could call for 13 measures after [J] in the same piece. Upon examination these two references could refer to the exact same musical content.

two separate passages were stored in the database as two separate records: one including the opening muted measures, and another with only the unmuted section. Both passages were recorded in the database for granular statistics. Once both passages were entered, another record was created encompassing the entire passage – the muted measures along with the rest of the excerpt. The larger excerpt becomes what will be shown to the user. Several works were found on the audition lists where specific passages were never mentioned. In these cases, each work was examined with the assistance of the Research Committee Chair to determine which excerpts could be considered the most pertinent passages for a website. The dynamic and flexible nature of VTEO, once online, will easily allow for additions and modifications when the need arises.

Excerpt Image Generation

In the project's initial planning phase, it was assumed that extracting notation would be a relatively simple, though somewhat time-consuming process – find a part on IMSLP¹² or in the local library and copy the desired excerpt. Once the project was fully underway, it quickly became apparent that this stage would be very substantial and time consuming. The following issues contributed to the heavy workload:

- Lists often call for parts other than principal trumpet. In an audition, these excerpts are often performed within a section. Therefore, notation with all the pertinent parts would be educationally valuable for analysis. Plus, it allows practicing with others from a shared device.

¹² “IMSLP/Petrucchi Music Library: Free Public Domain Sheet Music.”

- Parts from copyrighted works can be difficult and time-consuming to obtain. For excerpts fitting this category, a study score was used to generate a new trumpet part. This was often done for multi-part excerpts.
- The educational value of showing all parts that play important roles in the excerpt to determine intonation and balance issues is worth the extra time and effort to notate the concurrent parts.

With these considerations in mind, the image generation phase consisted of the following:

1. Find a part for the excerpt. If a part isn't easily accessible, or if an excerpt consists of multiple (important) parts, find a full or miniature score either in the library or by using online resources, such as IMSLP,¹³ or the New York Philharmonic's Digital Archives.¹⁴
2. If the passage consists of and is available as an individual part, copy the passage, crop it to a suitable size, include some indication of tempo and meter, and save it.
3. If the passage consists of multiple parts, or the individual part isn't available, notate the passage using notation software. Export the passage as a graphics file and save it.
4. If a passage is from a copyrighted work, include a label stating permission from the publisher and place a "Do Not Print" watermark on the graphic to discourage illegal copying.

¹³ Ibid.

¹⁴ "New York Philharmonic | Digital Archives," accessed June 20, 2016, <http://archives.nyphil.org/>.

5. Assign each image file to a *MasterPassageImages* record, which in turn is linked to a *MasterPassage* record. A “Master Passage” defines what is viewable to the visitor.¹⁵

By leveraging VTEO’s database structure, new, updated and corrected versions of images will be easily and quickly available to visitors.

Video Compilation

The decision to include videos instead of audio for excerpts, as the existing excerpt websites do, is two-fold: (a) copyright issues; and (b) educational value. The legal issues of using audio clips longer than 30 seconds are discussed in Chapter 3: Methodology Interlude, Copyright Issues. In short, embedding associated YouTube videos is a fully legal method of presenting not only audio, but in many cases, filmed live performances by major orchestras. Educationally speaking, an embedded video doesn’t need to stop at the end of its corresponding excerpt. The visitor can easily continue to listen to the performance to hear how the passage fits within the context of the whole work. They can also observe equipment choices, section arrangement, and stage presence.

The process of determining which videos to include was relatively simple, though somewhat time-consuming. For any given passage, the following steps were taken:

- Search YouTube for the desired work.
- In the results, locate videos of decent or high quality.

¹⁵ See “Appendix 2: Database Architecture” for an explanation of VTEO’s data tables.

- Locate videos of major professional orchestras.
- Give preference to videos that represents the work's cultural context by finding either an orchestra or conductor from the composer's nationality.
- Find a good starting point within the video for the excerpt.
- Create a new *MasterPassageImageVideo*¹⁶ record storing the YouTube URL, the YouTube ID (for programming purposes), and a caption for the video consisting of the ensemble's name along with that of the conductor.

Once a video has been located and entered into the database, there is no guarantee that the video will remain available in perpetuity. On the online version of the site, a "Feedback/Suggestions/Report" feature will allow visitors to easily report a deactivated video or broken link.¹⁷

* * *

This chapter covered an outline of the process in determining what material to include by: (a) surveying audition lists; (b) generating excerpt images; and (c) associating YouTube videos to those images. It also covered some of the structural issues and caveats in defining relationships between excerpts and their associated audition lists.

VTEO is not intended to be an exhaustive bibliography of all things orchestral. It does provide, however, a repository of orchestral trumpet resources that can be efficiently maintained and updated.

¹⁶ See "Appendix 2: Database Architecture" for an explanation of VTEO's data tables.

¹⁷ See "Chapter 7: Next Steps"

Chapter 3: METHODOLOGY INTERLUDE, COPYRIGHT ISSUES

Of the 110 pieces represented in VTEO, 62 are in the public domain. The remaining 48 works are still under copyright law. All existing brass excerpt websites attempt to address this issue by claiming protection under the “Fair Use” clause of the law. The general understanding of Fair Use is that the copied material is protected if it is: (a) for educational use only; (b) a small percentage of the original; and (c) not for profit. This can be successfully applied in several cases, both on and offline. However, a fourth point in the law is often overlooked. The validity of a Fair Use claim also depends on: (d) the effect of the use upon the potential market for or value of the copyrighted work. In the case of a public website with a potentially massive audience, the law becomes much more open to interpretation, both by the copier and the copyright holder as to how the availability of copyrighted material on a globally public network influences the potential market of the work. In the case of VTEO, the decision was made to make a show of good faith and contact each publisher individually in order to ensure legality.

With the invaluable assistance of Mariel Stauff at the Performing Ensembles Division at Indiana University, works under copyright and which publishers held the rights to those works were determined. With further assistance from the publishers, a finalized list of copyrighted works and rights owners was determined. Table 3.1 lists the copyrighted works used in VTEO along with the corresponding publisher.

Table 3.1. Copyrighted works and their publishers

Composer	Piece	Publisher
Adams	City Noir	Boosey & Hawkes
	Doctor Atomic	Boosey & Hawkes

Composer	Piece	Publisher
Barber	First Essay for Orchestra	Schirmer
	Symphony No.1	Schirmer
Bartok	Concerto for Orchestra, Sz. 116	Boosey & Hawkes
	Concerto for Piano No.2, Sz.95	Boosey & Hawkes
	Miraculous Mandarin	Boosey & Hawkes
Berg	Kammerkonzert	United Edition
	Lulu Suite	United Edition
	Violin Concerto	United Edition
	Wozzeck, Op.7	United Edition
Bernstein	Symphonic Dances from West Side Story	Schirmer
Britten	Four Sea Interludes from Peter Grimes	Boosey & Hawkes
	Sinfonia da requiem	Boosey & Hawkes
	Young Person's Guide to the Orchestra	Boosey & Hawkes
Copland	An Outdoor Overture	Boosey & Hawkes
	Quiet City	Boosey & Hawkes
	Rodeo	Boosey & Hawkes
	Symphony No.3	Boosey & Hawkes
Cowell	Synchrony	Heinrichshofen's Verlag
Gershwin	An American in Paris	Alfred Music
	Piano Concerto in F Major	Alfred Music
Harbison	Concerto for Double Brass Choir & Orchestra	Schirmer
Mussorgsky	Pictures at an Exhibition	Schirmer
Prokofiev	Cinderella Suite No.1	Schirmer
	Lt. Kije Suite	Boosey & Hawkes
	Symphony No.5, Op.100	Schirmer
	Violin Concerto No.2	Boosey & Hawkes
Rachmaninoff	Rhapsody on a Theme of Paganini, Op.43	Boosey & Hawkes
	Symphony No.3, Op.44	Boosey & Hawkes
Ravel	Bolero	Boosey & Hawkes
	Piano Concerto in G Major	Boosey & Hawkes
Respighi	Pines of Rome	Hal Leonard
Schoenberg	Gurrelieder	United Edition
	Theme and Variations, Op. 43b	Schirmer
Shostakovich	Concerto for Trumpet, Piano and Strings	Schirmer
	Symphony No.1	Schirmer
	Symphony No.5	Schirmer
	Symphony No.8	Schirmer
	Symphony No.9	Schirmer
Strauss	Der Rosenkavalier Suite, TrV 227d	Boosey & Hawkes

Composer	Piece	Publisher
Stravinsky	A Soldier's Tale	Schirmer
	Petrouchka (1947 version)	Boosey & Hawkes
	Pulcinella	Boosey & Hawkes
	Song of the Nightingale	Boosey & Hawkes
	The Firebird	Schott
	The Right of Spring	Boosey & Hawkes
Williams	Summon the Heroes	Alfred Music

These publishers had a variety of interpretations of Fair Use. For both the offline and online version of the project, every publisher required an official permission label for each excerpt. All publishers provided permission for excerpt extraction and duplication at no charge for the initial offline project. For the online version, all publishers stated they would require a licensing fee, even though the online phase falls under the assumed interpretation of Fair Use. This correspondence with the copyright holders clearly points out a legal gray area, which other online excerpt repository websites are unintentionally avoiding. Legal issues also apply to audio samples, which are present in abundance on these websites. Whether educational or commercial, audio clips online are limited by law to 30 seconds for promotional purposes.¹ Current excerpt websites have numerous audio clips well over the 30-second limit. A legal solution of providing audio is to replace ripped audio files with embedded links to YouTube videos.²

¹ “37 CFR 385.14 - Promotional Royalty Rate. | US Law | LII / Legal Information Institute,” accessed June 11, 2016, <https://www.law.cornell.edu/cfr/text/37/385.14>.

² “Flava Works Inc. v. Gunter - Wikipedia, the Free Encyclopedia,” accessed June 14, 2016, https://en.wikipedia.org/wiki/Flava_Works_Inc._v._Gunter.

Chapter 4: METHODOLOGY PART II, TECHNICAL ASPECTS

A website focused on practice materials needs to be aesthetically attractive, intuitive to use, and provide a wealth of information in order for visitors to make it a regular and comfortable part of their regular practice session. For any website in any field, when any of these three factors is absent, the visitor return rate is very low. They might visit it a few times, but then quickly forget about it. The way a website is structured under the hood and presented on the surface defines how effective a tool it will be. Chapter 2: Methodology Part I focused on the determination and construction overview of website content – excerpts, videos, audition lists, and statistics. This chapter discusses the “what’s under the hood” of VTEO.

Development of the website consisted of three main phases: (a) database design and data entry; (b) website user-interface design; and (c) website implementation. The first two are discussed in this chapter. Website implementation, the code and software architecture, is beyond the scope of this document. For those interested in the project file structure and source code, the files are unencrypted and accessible in the media component of this project.

Database Design and Data Entry

The database architecture and implementation system of VTEO evolved over the course of the project. As new scenarios arose, changes to the system and process were required. This section provides an overview of the database creation and data-entry

process. For an overview of the finalized database structure, please refer to Appendix 2: Database Architecture.

Initially, it was assumed that finding a long list of excerpts would be an easy and straightforward process. Find a list, glean the data off the list, and put it into a simple JavaScript array,¹ which could later be converted into a relational database. After entering the data for just a few lists, it quickly became apparent that a more robust and flexible system would need to be developed to handle the varieties of audition list entries.

The first attempt at creating a database was to make a set of simple JavaScript arrays that represented audition lists, composers, pieces and excerpts. Without delving into the pitfalls of that simple, and inflexible, system, the database needed to evolve into a full-blown Microsoft SQL database with an interface programmed using Microsoft .NET's C# programming language. The new and improved system worked well, until – after a hiatus from the project – expired software licenses forced a conversion of the system to a MySQL database with an interfacing application programmed using PHP. The new system allows a Webmaster to maintain data through a web browser, whereas the C# application was tied to an individual computer. The MySQL/PHP solution provides a flexible (and free) solution of maintaining a robust and expandable database system.

Data-entry occurred throughout these growing pains. In the end, the following is an outline of the data-entry tasks that were required to build the content of VTEO. Data-

¹ An understanding of the technical terms in this chapter is not necessary to follow the technical discussion presented.

entry was performed using the “VTEO Data Editor” (and formally the .NET C# application). Custom tweaks and troubleshooting were performed using SQL scripts programmed in MySQL Workbench (and formally MSSQL Enterprise Manager).

- Enter general audition list information into the *AuditionLists* table as well as general comments into the *AuditionListComments* table.
- Enter all composers referenced in the lists into the *Composers* table.
- Enter all works referenced into the *Pieces* table and assign them to their respective composers. This includes finding IMSLP links, determining score or part sources, and acquiring publisher permissions for copyrighted works.
- Enter all solos and other non-excerpt related pieces referenced in the lists. These works aren’t included on the website, but statistics are extracted from them.
- Enter all movements for each piece into the *Movements* table and assign them to their respective pieces.
- Enter all passages from each list into the *Passages* table and assign them to their respective movements.
 - Normalize excerpt passages. Some lists call for exact measure numbers, where others approximate by rehearsal marks. Often, entries that look vastly different are in fact identical. Make sure each excerpt is well represented and the labeling scheme is standardized.
 - Merge passages that appear different but are identical into one record.
 - If the musical content of two excerpt entries differs slightly, keep both instances. Granular statistics will be extracted from these differences.

- Assign sets of normalized passages to “Master Passage” records in the *MasterPassages* table. These Master Passages encapsulate similar yet slightly different passages. The website refers to Master Passages to know what a visitor sees on the screen. In this manner, if one list calls for more measures than another list, such as is seen in the *Ballerina’s Dance* from Stravinsky’s *Petrouchka*, the site displays the whole passage, while the database maintains the granular data for statistical reporting.
- If a passage covers a long span of music, sometimes an entire movement, break it up into smaller, manageable passages that then can be assigned to Master Passages. Strauss’s *Ein Heldenleben* is a major culprit of this issue. Some lists call for the entire “Battle Scene,” which is impractical to display on a small screen. Breaking up large passages into smaller segments solves this issue.
- For each audition list, create records that link entries on the list to their corresponding passages, movements or pieces in the database. These records are stored in the *ListEntry* table. Audition list statistics are all derived from the data relations created in this table.
- Assign legally copied and self-notated excerpts to Master Passages via the *MasterPassageImages* table. Create self-notated excerpts using Avid’s *Sibelius 7.5*.
- Assign appropriate YouTube videos to each Master Passage Image.

With a stable and flexible database system in place to store a core of data, VTEO will be easily maintained and updated over the years.

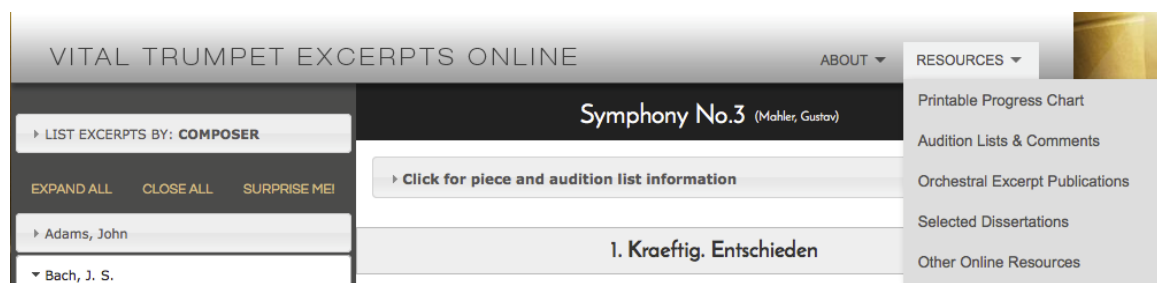
Website Design

If a website looks good, the chances of return visits are much higher than if the website looks mediocre or out-of-date. The look and feel, just like the sound and musical presentation of a piece of music, is of paramount importance. If time and effort isn't devoted to making a product look polished, a visitor won't spend much time and effort using the product. VTEO isn't necessarily a professionally designed website, but design factors were taken seriously with a focus on natural interactivity and the feeling of a finished, professional product – just like what an audience expects to hear at a professional concert. VTEO consists of five main sections discussed below:

- The header and menu bar
- The left-side navigation bar
- The main content panel
- The passage viewer

The main header and menu bar

Figure 4.1. The main header and menu bar



This section is used to navigate around the *non-excerpt* pages of the site. The header on the left is a simple link back to the “Welcome / How to Use” page. The menu system on the right directs the visitor to several auxiliary content pages. The menu bar

was designed with both mouse and touch-screen oriented devices in mind. Menus often pose a frustrating problem for smartphone and tablet users where a menu opens and immediately closes when it's touched, or doesn't appear at all. VTEO uses a jQuery plugin, which allows users of any device to easily navigate through the menus. The simple menu system consists of the following menu items:

- About
 - Welcome / How to Use
 - About VTEO
 - A Word on Copyright Issues
- Resources
 - Printable Progress Chart
 - Audition Lists & Comments
 - Orchestral Excerpts Publications
 - Selected Dissertations
 - Other Online Resources

The navigation bar

A user needs to be able to locate the piece they want to work on easily and quickly. They find and click a piece, which appears with its corresponding passages (based on *MasterPassageImages*) in the main content panel. The navigation bar uses a jQuery UI *Accordion* object that allows the visitor to either see a few pieces at a time or all pieces at once. Above the navigation bar, a section called “List Excerpts By:” allows the visitor to view the navigation bar by “Work”, “Composer” or “List.”

Figure 4.2. The left-side navigation bar's different view types

▼ LIST EXCERPTS BY: TITLE OF WORK	▼ LIST EXCERPTS BY: COMPOSER	▼ LIST EXCERPTS BY: AUDITION LIST
<div>WORK</div> <div>COMPOSER</div> <div>LIST</div>	<div>WORK</div> <div>COMPOSER</div> <div>LIST</div>	<div>WORK</div> <div>COMPOSER</div> <div>LIST</div>
EXPAND ALL CLOSE ALL SURPRISE ME!	EXPAND ALL CLOSE ALL SURPRISE ME!	EXPAND ALL CLOSE ALL SURPRISE ME!
▼ List of Works	▼ Adams, John	▶ Atlanta Symphony (Spring 2005)
A Soldier's Tale (Stravinsky) (13%)	City Noir (2%)	▶ Atlanta Symphony (May 2006)
Academic Festival Overture, Op.80 (Brahms) (49%)	Doctor Atomic (4%)	▶ Atlanta Symphony (Sep 2007)
Alborada Grazioso (Ravel) (11%)	▶ Bach, J. S.	▶ Atlanta Symphony (June 2010)
Alpine Symphony, Op.64 (Strauss) (17%)	▶ Barber, Samuel	▶ Atlanta Symphony (Feb-May 2012)
Also Sprach Zarathustra, Op.30 (Strauss) (13%)	▼ Bartok, Bela	▶ Atlanta Symphony (May-June 2013)
An American in Paris (Gershwin) (19%)	Concerto for Orchestra, Sz. 116 (75%)	▼ Baltimore Symphony (Spring 2007)
An Outdoor Overture (Copland) (28%)	Concerto for Piano No.2, Sz.95 (2%)	Concerto for Orchestra, Sz. 116 (Bartok) (75%)
B Minor Mass (Bach) (32%)	Miraculous Mandarin (15%)	Miraculous Mandarin (Bartok) (15%)
Bolero (Ravel) (8%)		

Figure 4.2 shows the different sorting styles. On the left, all pieces are sorted by work followed by the composer's name. This way, if a visitor forgets (or doesn't know) a composer's name, or simply prefers to search by work, that option is available. The navigation bar in the middle of figure 4.2 shows pieces organized first by composer. This is the default option when the website is loaded. On the right of figure 4.2 is a view of audition lists in the system (from 2003 to 2013) with works found on each list. This gives the visitor an opportunity to work through a number of audition lists, in this case, Baltimore Symphony's Spring 2007 audition.

The "Expand All" button allows the visitor to view all items at once. "Close All" does the opposite. It collapses all of the open sections. These two features are simply a navigation convenience.

The "Surprise Me!" button is discussed at length in Chapter 5: Learning Aids. In brief, it opens an excerpt based on probability with an element of randomness.

The main content panel

The main content panel shown in figure 4.3 serves two functions. First, it displays “Information Pages” that are chosen from the menu bar, such as “About / How to Use.” Second, it displays a work and its corresponding information, audition lists, movements and passages. In both cases, in order to populate the main content panel, a JavaScript function is called which loads content dynamically, either from a separate HTML file (in the cases of “Information Pages”), or by building HTML content on the fly by referencing the database (stored in /Scripts/database.js² in the offline version).

Figure 4.3. The main content panel

The screenshot displays a web interface for the B Minor Mass by J.S. Bach. On the left, a sidebar titled "LIST EXCERPTS BY: COMPOSER" lists composers with expand/collapse icons. Under "Bach, J. S.", the B Minor Mass is selected, showing its percentage (32%) and a list of other works by Bach. The main panel, titled "B Minor Mass (Bach, J. S.)", contains a section for "Click for piece and audition list information" with a link to the IMSLP page and a button for audition lists. Below this, two musical excerpts are shown: "12. Cum sancto spiritu" (measures 25-37) and "13. Credo" (measures 29-End). Each excerpt includes a title, tempo/mood, and a musical score snippet.

LIST EXCERPTS BY: COMPOSER

EXPAND ALL CLOSE ALL SURPRISE ME!

Adams, John

Bach, J. S.

- B Minor Mass (32%)
- Brandenburg Concerto No.2, BWV 1047 (4%)
- Christmas Oratorio, BWV 248 (21%)
- Magnificat (28%)

Barber, Samuel

Bartok, Bela

Beethoven, Ludwig van

Berg, Alban

Berlioz, Hector

Bernstein, Leonard

Bizet, Georges

Brahms, Johannes

Britten, Benjamin

Bruckner, Anton

Copland, Aaron

Cowell, Henry

B Minor Mass (Bach, J. S.)

Click for piece and audition list information

IMSLP Page AVAILABLE: [Link to IMSLP for work details and score study](#)

Audition lists that include this work (32% of 53 lists)

12. Cum sancto spiritu

25-37

Nr. 11. „Cum sancto spiritu“ (Chor).

Vivace.

13. Credo

29 - End

Nr. 13. „Credo“ (2.) (Chor).

Allegro.

tranquillo

Tempo I.

² See Appendix I: File System Structure

When an “Information Page” is requested, a function is called to dynamically populate the main content panel. In the case of loading a work into the panel, all of the HTML markup necessary to display, not only the piece’s associated audition lists and available passages visible in the panel, but also the content of the passage viewer (discussed below), is generated and added to the main content panel. The passage viewer is hidden until the user selects one of the passages. When another piece is selected from the left-side navigation (or the “Surprise Me!” feature), the main content panel’s associated HTML is cleared and new HTML is generated for the requested work.

This is the vital technical crux of VTEO that differs from other excerpt websites. Basically, the site consists of one main “mother file.” Its responsibility is to dynamically load data from the database, generate the presentation through on-the-fly scripting, and place the output in the content panel. Other sites consist of a long list of separate files for each and every piece. The implication of the architecture difference is paramount. When a new feature, such as account-based practice logs or professional commentary, is introduced, only one piece of code needs to be altered: the script that generates the presentation. Websites that have separate files for each and every page (i.e., piece) would need to go through each file individually and add the new features. This is highly prone to errors, Webmaster stress, and as a result, lack of site improvement. It boils down to this: VTEO’s dynamic loading architecture allows the site to easily grow in response to educator and student needs. When a new feature is needed, it only needs to be coded once to be available throughout the site. It takes more time upfront to develop and code the

foundation of the structure, but in the long-term, it becomes a viable and easily evolvable resource.

The passage viewer

This is where the fun takes place. Using some code and leveraging embedded YouTube videos, a visitor can study an excerpt in an aesthetically attractive and user-friendly container. Only a brief explanation of the passage viewer’s individual parts is necessary.

Figure 4.4. The passage viewer

As seen in figure 4.4, notation for an excerpt is presented on the left (determined by *MasterPassageImages*). Great effort was made to ensure that the notation was readable at varying screen resolutions. The image scales to fit as much of the screen’s real estate as possible. If the visitor would like even more space for the notation, a “Show/Hide Info” tab attached to the right-side panel is available to close said panel and

increase the notation's screen space. If the work consists of more than one excerpt, the visitor can switch between excerpts by either clicking the left and right arrows at the top-left of the screen, swiping the screen, or by pressing the left and right arrow keys. On the top right corner of the passage viewer, composer, movement, and instrumentation for the excerpt is displayed. The key of trumpet for every excerpt is shown in the "instrumentation" field. Following this information is an embedded YouTube video player. For a majority of excerpts, two videos are included. Below the embedded video player, corresponding audition lists and the "Surprise Me!" feature are available. To close the Passage Viewer, the visitor either clicks the top-left "X" button or presses the escape key.

* * *

The look, feel, and feature expandability of the passage viewer is crucial to VTEO. This is the place where visitors will spend most of their time on the site. A user-friendly and attractive interface is required to ensure the visitor finds the website useful enough to recommend to students and make return visits through the years.

Chapter 5: LEARNING AIDS

The ability for students to have convenient access to orchestral excerpts and supporting material is in and of itself beneficial. An interactive site that provides educational tools is even more advantageous for both students and educators. Due to the technical limitations of the offline version of VTEO, only tools that can function offline are implemented. The features that an online version will provide are discussed in the chapter, Chapter 6: Next Steps. The offline version provides two basic tools: (a) A simple downloadable and printable progress chart; and (b) the “Surprise Me!” feature.

The Printable Progress Chart

Figure 5.1. Trumpet excerpt progress log

		Listened	Practiced	Memorized	Recorded
Adams, John	City Noir	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Doctor Atomic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bach, J. S.	B Minor Mass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Brandenburg Concerto No.2, BWV 1047	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Christmas Oratorio, BWV 248	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Magnificat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Sarabande	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barber, Samuel	First Essay for Orchestra	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Symphony No.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bartok, Bela	Concerto for Orchestra, Sz. 116	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Concerto for Piano No.2, Sz.95	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Miraculous Mandarin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beethoven, Ludwig van	Leonore Overture No.2, Op.72a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

By maintaining a simple progress chart, a student will be able to easily keep track of which pieces they’ve worked on and to what extent. It also helps avoid being mired down in only the most standard excerpts. The chart lists each work in VTEO’s database with the following four corresponding checkmarks: (a) Listened; (b) Practiced; (c)

Memorized; and (d) Recorded. The assumption is that once a student has put in enough time to memorize (well) and record (well) a set of passages, a good amount of work has taken place. Of course, this leaves out actions such as “Listened to a professional performance live,” “performed on an audition,” “studied with Professor X,” and so on. No date or comment fields are included in this chart. It only serves as a rudimentary step to a more robust online log based system, which is discussed below.

The “Surprise Me!” Feature

One of the great benefits of using a script based website is the ability to leverage the power of dynamic interactivity. The “Surprise Me!” function is a very simple concept, but a concept that makes VTEO more than just a large collection of material.

When the visitor clicks on the “Surprise Me!” button (available from both the home page and the full-screen passage viewer), an excerpt is chosen and displayed by a somewhat random, yet percentage based algorithm. In essence, this tool aims to roughly simulate the experience of an audition committee or instructor asking for an unexpected excerpt at any time. It also ensures that a student doesn’t consistently gravitate to a few favorite works. The following is an outline of the selection algorithm, which occurs each time the “Surprise Me!” button is activated:

1. There is a 25% chance that the selection will be completely and absolutely random, not giving preference to any set of works. This makes sure that a work that appears on only a few audition lists will occasionally pop-up.
2. If the selection is not random (a 75% chance), then choose a work based off of probability. For example: *Petrouchka* is called for on 96% of surveyed audition

lists. Thus, it has a 96% chance of any one of its excerpts being selected. If a work has a percentage of 47%, it has a 47% chance of being selected.

3. To avoid constant repetition of the top 10 percentile of works being selected, the algorithm only allows any given work to be selected once in a series of four consecutive “Surprise Me!” clicks.

These three aspects of the selection algorithm attempt to simulate a fair representation of what might be expected to pull up depending on excerpt popularity, as well as throwing an occasional curveball to keep the visitor on their toes. Note that the final selection may display any passage within the selected piece. The algorithm does not take into consideration the probabilities of specific passages within a piece. This simply means that if *Petrouchka* is selected, the chance of any one of its passages being displayed is the same.

* * *

A website with a collection of excerpts is useful, but a site that also incorporates learning aids is even more beneficial. Chapter 7: Next Steps, discusses some of the educational features that the online version of VTEO will offer.

Chapter 6: TOTALS AND STATISTICS

Dr. David Hunsicker's excellent doctoral dissertation³ presents the rates of works found on audition lists.⁴ His study is a follow-up to two previous studies done by Lawrence House (1981)⁵ and a later study by William Stowman (1994).⁶ This chapter confirms Hunsicker's totals. In addition to popularity of works, this study presents a new set of statistics gleaned from the 2003-2013 lists, including the results of queries such as rotary trumpet preference, solo popularity, and specific passage popularity. For a full listing of statistics acquired, please consult Appendix III: Compiled Data and Statistics.

Comparison of "Top 20" Lists

Dr. Hunsicker's research from 2012 gathered audition lists from professional orchestras across the United States of America. He included major symphony orchestras as well as professional part-time orchestras. As stated in Chapter 2: Methodology I, Content Assemblage, the present study consulted the League of American Orchestras' *Organization Directory* and determined that orchestras found in the directory in 2013 under the "Group 1" category would be included. Hunsicker includes both "Group 1" and

³ John David Hunsicker, "Professional Orchestral Auditions for Trumpet: Criteria for Evaluation of Candidates, Common Mistakes and Concerns, and a Discussion of the Top Fifteen Excerpts Asked at Auditions" (Doctoral Dissertation, Arizona State University, 2012).

⁴ Dr. Hunsicker very generously contributed several lists from his own collection.

⁵ Lawrence House, "A Survey of 43 Audition Lists for Trumpet," *International Trumpet Guild Journal* 7, no. 2 (February 1981): 28.

⁶ William Stowman, "A Survey of Orchestral Audition Lists for Trumpet," *International Trumpet Guild Journal* 18, no. 3 (February 1994): 48–50, 34.

“Group 2” ensembles in his research, resulting in 80 acquired lists.⁷ This study focuses only on the top tier, resulting in 53 acquired lists.

Practically speaking, the differences found in Hunsicker’s and this study’s surveys were minor. Whereas Hunsicker provides separate result sets for principal, second, and third trumpet audition lists, this study doesn’t make a distinction due to the “multi-position” nature of several lists (Third/Assistant Principal/Utility Trumpet, for example). Despite the differences in sampling, a side-by-side comparison of the “Top 20” works listed in table 6.1 demonstrates a continuing trend of which pieces show up on audition lists in the United States.

⁷ John David Hunsicker, “Surveys of Orchestral Audition Lists,” *International Trumpet Guild Journal*, no. March 2011 (March 2011): 66.

Table 6.1. Comparison of "Top 20" lists

VTEO Totals			Hunsicker's Totals		
Composer	Piece	Rate	Composer	Piece	Total
Stravinsky	Petrouchka (1947 version)	96%	Stravinsky	Petrouchka	91%
Mussorgsky	Pictures at an Exhibition	92%	Mahler	Symphony No.5	81%
Respighi	Pines of Rome	87%	Respighi	Pines of Rome	81%
Mahler	Symphony No.5	81%	Mussorgsky/Ravel	Pictures at an Exhibition	80%
Schumann	Symphony No.2, Op.61	81%	Strauss	Ein Heldenleben	69%
Bartók	Concerto for Orchestra, Sz. 116	72%	Rimsky-Korsakov	Scheherazade	64%
Strauss	Ein Heldenleben, Op.40	72%	Beethoven	Leonore Overture No.3	61%
Rimsky-Korsakov	Scheherazade, Op.35	66%	Bartók	Concerto for Orchestra	58%
Ravel	Piano Concerto in G Major	64%	Schumann	Symphony No.2	56%
Gershwin	Piano Concerto in F Major	57%	Mahler	Symphony No.3	55%
Mahler	Symphony No.3	55%	Ravel	Piano Concerto in G Major	50%
Brahms	Academic Festival Overture, Op.80	49%	Gershwin	Piano Concerto in F Major	49%
Beethoven	Leonore Overture No.3, Op.72b	43%	Bizet	Carmen	45%
Wagner	Parsifal	42%	Brahms	Academic Festival Overture	44%
Shostakovich	Concerto for Trumpet, Piano and Strings	38%	Bach	Magnificat	30%
Bizet	Carmen Suite No.1	34%	Bach	B Minor Mass	29%
Bach	B Minor Mass	30%	Beethoven	Leonore Overture No.2	28%
Bach	Magnificat	28%	Debussy	Fetes	28%
Bruckner	Symphony No.7 in E major	28%	Strauss	Don Juan	28%
Copland	An Outdoor Overture	28%	Wagner	Parsifal	26%

Clearly, a majority of works is within two to four slots from their counterpart. The few entries that don't appear to have a match, especially those in the lower section of the table, are still in proximity when results beyond the "Top 20" limit are taken into consideration. The only true outlier is Bruckner's Symphony No. 7 in E Major, which appears much higher in this study's list due to its appearance on several second and third trumpet audition lists – lists that are reported separately in Hunsicker's study. Other than a little jostling for ratings, this study's analysis confirms that of Hunsicker's. It also confirms what professors and orchestral performers who are intimately acquainted with the process know intuitively from experience.

Whether or not a student aspires to a professional orchestral career, the works represented in table 6.1 are excellent examples of a variety of genres, styles, and techniques. Their study will broaden the musicianship of any student. A "Top 20" (or even a "Top 50") list should only be viewed as a core of orchestral trumpet repertoire upon which to continually expand and build.

Thoughts on Practicing Excerpts: Keeping Context in Mind

One consideration while learning an orchestral excerpt is to keep in mind the role it should play in one's practicing. In other words, a proper mindset while practicing excerpts is vital. Too often, excerpts are approached in two (in the author's view), potentially limiting ways. First, they are approached simply as an exercise, instead of a snapshot of a real piece of music. Practicing an excerpt in this way can potentially produce a mechanical or stiff interpretation when it's performed. Second, the opposite approach is to treat an excerpt with an undue amount of reverence, essentially blowing its

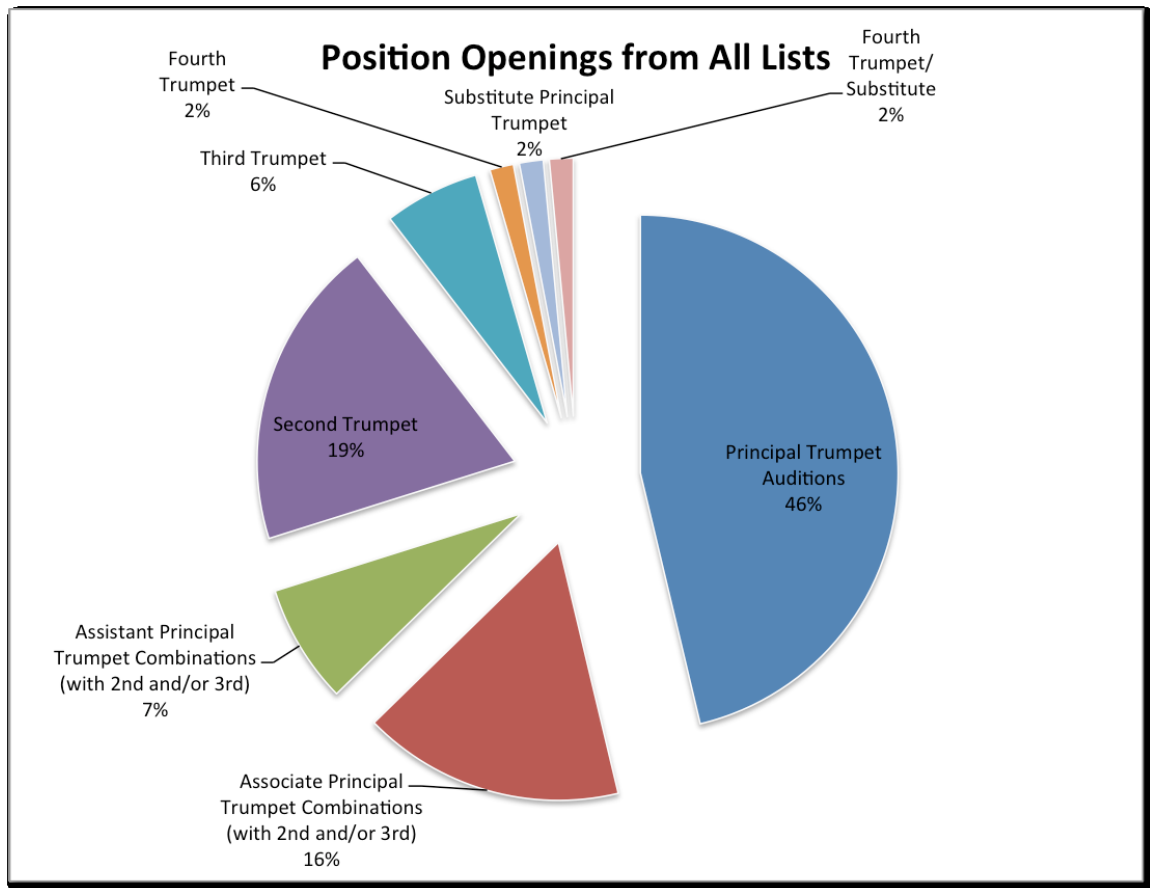
role out of proportion. This approach can ironically lead back to technical thinking – about music making! It may also lead to an unhealthy amount of psychological pressure and stress during a performance. It is the author’s recommendation to approach orchestral repertoire as whole works where possible, always keeping the large-scale context in mind. Also, working on etudes and exercises that focus on a given orchestral passage’s style will assist the mind in putting its entire focus on making beautiful music instead of learning new techniques. Indeed, students should have a firm knowledge of the works found in “Top X” lists in order to be prepared for school and professional auditions and performances. But more importantly, they need to know the works in order to gain access to a larger palette of musical colors. A student may never take a professional audition, but learning the repertoire will greatly enhance their musical personality and maturity.

Audition Lists Compiled

Table 7.2 (found in Appendix 3) shows that there were 66 audition postings over the course of 2003 to 2013 from “Group 1” orchestras. Of those 66, 53 were acquired. 13 were missing due to deleted files (i.e., a personnel manager’s hard-drive had crashed and lost all their audition list history), a policy of not releasing lists outside of official audition channels, or simply no response. It was concluded that 53 lists over the course of 10 years would provide sufficient data for the purposes of VTEO. Tables 7.3 and 7.2 (Appendix 3) detail the acquired and missing lists.

Position Openings by Type

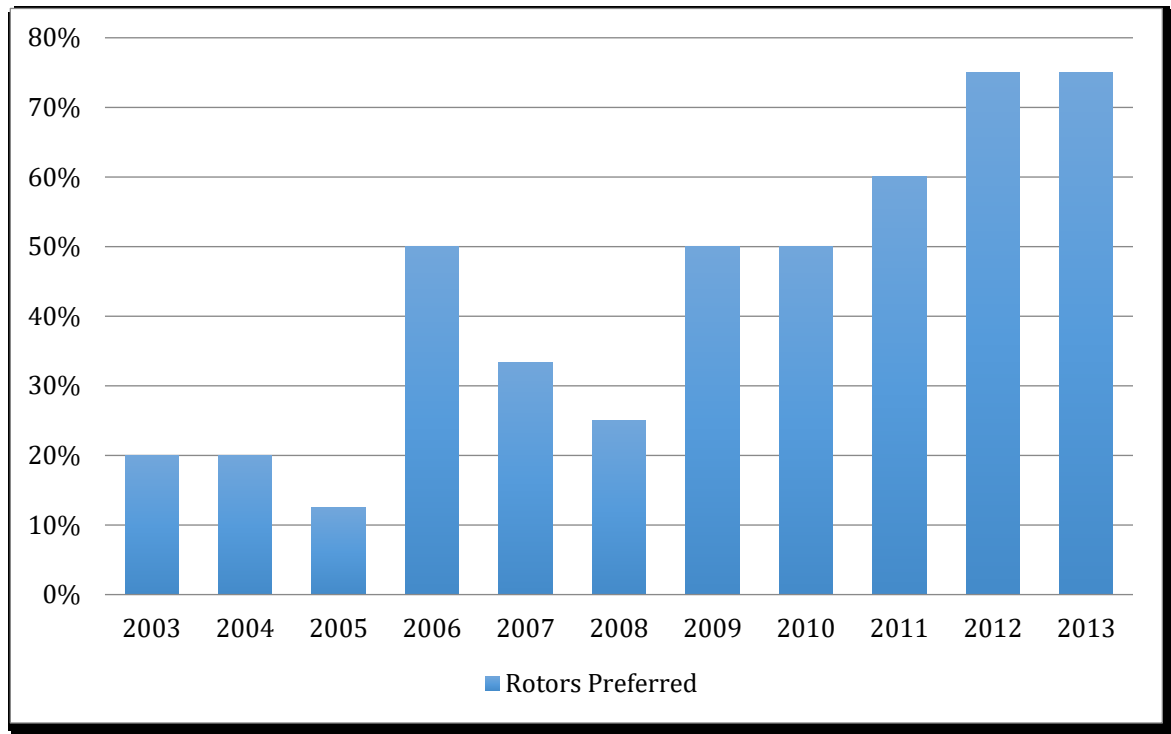
Figure 6.1. Job postings from 2003 to 2013, factored by position



From 2003 to 2013, “Principal Trumpet” positions were in much higher demand (46%) than other position types individually. However, this signifies that 54% of postings were for jobs playing in the section and/or serving as substitute or utility trumpet. This indicates that excerpts relevant to *all* parts should be practiced. Knowledge of how each individual part fits within the rest of the section will allow a player to have an understanding of balance, intonation and section roles (i.e., support roles versus lead roles). Where an audition list calls for a section passage, VTEO includes multi-part scores to help understand how parts fit together.

Rotary Trumpet Preference Rate

Figure 6.2. Increased rotary trumpet preference

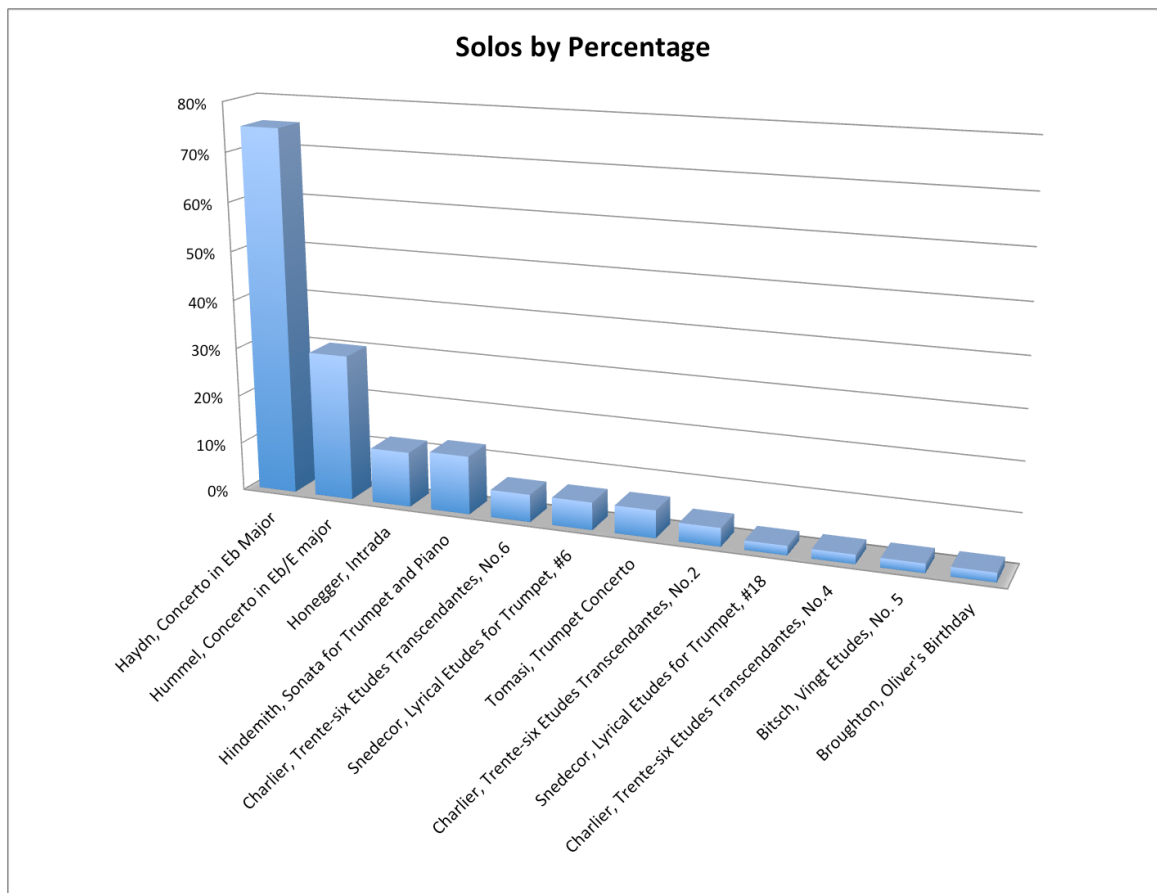


In the past, orchestras based in the United States relied primarily on piston trumpets, including for works by the Romantic composers of German speaking countries. In those countries, these works are traditionally performed on Deutsche-Trompetten (rotary trumpets). A recent trend is gaining ground in major orchestras in the United States. Figure 6.2 shows that there is a clear increase in demand for rotary trumpets for works of Brahms, Mahler, Bruckner, etc. Some orchestras state a “preference” for rotary. Indianapolis Symphony and Atlanta Symphony fit in this category. However, in 2013, Atlanta switched from “preferred” to “required.” The LA Philharmonic even requires rotary equipment for a second trumpet posting (and also requires a cornet for cornet

passages). It will be interesting to see if orchestras based in German speaking countries will require piston trumpets for non-Germanic works in the future.

Popularity of Solos

Figure 6.3. Solos requested by popularity



Along with traditional orchestral repertoire, auditions normally consist of performing a solo. The data in figure 6.3 likely isn't much of a surprise. The Haydn is a must-know piece, along with the Hummel. Composer, pedagogue, and former orchestral and solo performer Anthony Plog argues that the persistent and insistent use of the Haydn as an audition piece in the first round is an outdated tradition and (he feels) too often

eliminates wonderfully qualified orchestral trumpet players.¹ For a different perspective, this situation could be placed in a jazz context. How often is a jazz solo artist asked to play lead before being offered a small combo gig, or vice-versa? It could be argued that performing the Haydn (or any other concerto) on an orchestral trumpet audition is a similar situation to the jazz example. However, the case could also be made that in the current market's hyper-competitive atmosphere, a trumpet player needs to be comfortable in any style at a relatively high level in order to survive. The author does agree with Plog's core assertion that the audition process should be revisited and potentially updated to save money, avoid failed auditions, and to hire the best musician for the job. This document doesn't weigh into the argument any further, but the author would be interested in seeing further research conducted on this topic.

Macro and Micro: Entire Works vs. Granular Data

Practicing small passages from major works while forgetting their overall context is limiting. Keeping an entire work in mind – from the overall affect, form and historical context down to the smallest stylistic gesture – is required for a deep understanding of the work. With that being said, tables 7.14 and 7.15 provide two lists from the opposite ends of the “entire work/gesture spectrum.” Table 7.14 lists works that are called in their entirety – indicating the importance of practicing and knowing a whole work, not just the excerpts. Table 7.15 lists every normalized passage found on the surveyed audition lists. This table can be used to demonstrate that the muted passage at the beginning of Ravel's

¹ “The Case Against Haydn: Suggestions for Fairer and More Balanced Trumpet Auditions, Part 1,” *Anthony Plog*, July 7, 2014, accessed June 17, 2016, <https://anthonyplog.com/case-haydn-suggestions-fairer-balanced-trumpet-auditions-part-1/>.

Piano Concerto in G (starting 5 after [1]) is requested 17% of the time, whereas beginning after the mute change (starting at [2]) is requested 25% of the time. Table 7.14 shows that on the other end of the spectrum, 13% of lists request the entire work. Obviously, anybody seriously preparing for an audition needs to know the repertoire inside and out – the macro and the micro. These statistics are merely an indication of the weight certain passages and works receive on audition lists. When the stage-lights are on, these statistics don't matter. A musical maturity and understanding of a work's full context does.

Chapter 7: NEXT STEPS

Throughout the process of developing VTEO, it has been referred to as having an “offline” and “online” version. The main objective of this media project is to form an offline resource and foundation which can easily transition to an online public website. Once the site is online and able to leverage the power of server-based tools,² a number of valuable avenues will become available. The following is a brief discussion of some of the features that will be offered.

Instant User Feedback and Error-Reporting

One of the most common frustrations professors have is the problem of typos in excerpt print publications. VTEO will address this issue by providing a simple feedback form. When a user encounters an error, whether it is a notational glitch, a typo, or broken video link, the form will allow them to submit a report to the Webmaster, who would in turn receive the notification, fix the error, and notify users of the update through an “Updates” page and subscription-based email alerts. This feedback mechanism will also provide a means for users to submit new audition lists, newly discovered videos, and other recommendations of new content and features.

Ongoing Audition List Collection and Live Statistical Updates

As visitors submit new audition lists, the Webmaster will enter the data into the database. Once the data is in the system, all statistics that appear on the website will be

² Such as a live database instead of the simple JavaScript workaround used to meet the requirements of the offline phase.

immediately updated. Occasional snapshots of the data could be made to maintain a record of trends over the years.

Professional Suggestions and Advice

Professional performers in major orchestras (past and present) will be given the opportunity to provide insights to any excerpts of their choice. They will receive an “Expert” account that allows them to easily enter thoughts for any passage. A link to an informational page consisting of the expert’s biography – including links to their promotional content – will appear next to their comments. This will provide the contributors with increased visibility and free publicity in exchange for their expertise.

User Accounts for Online Logging

A user account won’t be mandatory to access the excerpts on VTEO.³ However, with a user account, a visitor will be able to easily take notes and check off certain goals, essentially creating a more robust online version of the offline printable progress chart. The site could provide occasional notifications, such as the last time they viewed an excerpt they had started practicing.

Notifications of Current Audition Postings

A live feed of data from the well-known audition posting website, musicalchairs.info, will be included in a “Current Audition Postings” page. This is

³ An exception may be access to copyrighted materials. Depending on licensing fees, a *free* student account may be required to view copyrighted materials.

another attempt of forming a central hub of orchestral material and information for students.

Global Audition Material Collection and Repertoire Expansion

The initial goal of VTEO is to provide a base collection of repertoire commonly called for within a limited region. It is not intended to simply provide easy access to material merely for the sake of preparing for an audition. It does intend to provide a broad spectrum of musical styles for students and their professors. The more stylistic mastery a student has, the deeper their musical understanding and performance will become. With the dynamic nature of the site in place, a global collection of audition material from not only orchestras, but also opera houses and concert bands from around the world will provide a wealth of material for visitors from around the globe.

* * *

VTEO will allow for continual improvement and expansion by tapping into feedback and expert advice from a network of student, professors, and contributing professionals. It will serve as a central repository of material, information, resources and educational tools that will focus on developing the musical understanding of the diligent student, and broadening access to the orchestral trumpet repertoire to a global audience.

Appendix 1: FILE SYSTEM STRUCTURE

VTEO is stored in a typical web project structure. Figure 7.1 shows the relevant folders and files that comprise the site. It also provides brief comments for the most pertinent items. The list excludes any supporting script plug-ins. References to all plugins are located in \index.html.

Figure 7.1. VTEO file system structure

— auditionLists	PDFs of audition lists
— ExcerptImages	Scanned and self-notated Master Passage Images
— InfoPages	Information web pages available from top-right menu
— about.html	
— auditionLists.html	
— copyright.html	
— dissertations.html	
— home.html	
— links.html	
— progress.html	
— publications.html	
— ProgressChart_v1.PDFs	Practice Progress Chart, PDF version
— Scripts	
— business.js	Database interfacing and HTML generation functions
— database.js	JavaScript database representation
— menuing.js	Top-right menu navigation generator
— ui-assist.js	User-Interface utilities
— Styles	Site images and CSS for consistent design
— Images	
— Home	
— Inside	
— home.css	
— inside.css	
— index.html	Main page. References scripts that populate site
— noVideos.html	Placeholder markup for passages with no videos
— vteoDataEditor	The VTEO Data Editor application
— ajaxCallDB.php	
— assignListEntry.php	
— assignListOtherWorks.php	
— assignListSolos.php	
— auditionComments.php	
— auditionLists.php	
— composers.php	
— generateJSDBase.php	
— index.php	
— masterPassageAudio.php	
— masterPassageImageVideo.php	
— masterPassageImages.php	
— masterPassages.php	
— movements.php	
— otherWorks.php	
— passages.php	
— php	
— business.php	
— db.php	
— debug.php	
— pieces.php	
— solos.php	
— style.css	
— vteo_config.ini	

Appendix 2: DATABASE ARCHITECTURE

The media component of this document is required to be available without an Internet connection. For static websites, this poses no problems. Dynamic websites, on the other hand, rely on online databases residing on a remote server. VTEO has enough data – and functionality that leverages that data (such as real-time statistical calculation and the “Surprise Me!” feature) – that a database is required.

The structure of the database is simple. For the purposes of the offline version, a MySQL database is stored locally and will be able to be easily transferred to an online server. A web-based application named “VTEO Data Editor” was developed to provide a basic interface for data-entry. It is able to create, edit, delete and assign records to related records. Discussion of each function of the editor is outside the scope of this document. However, each one provides the following:

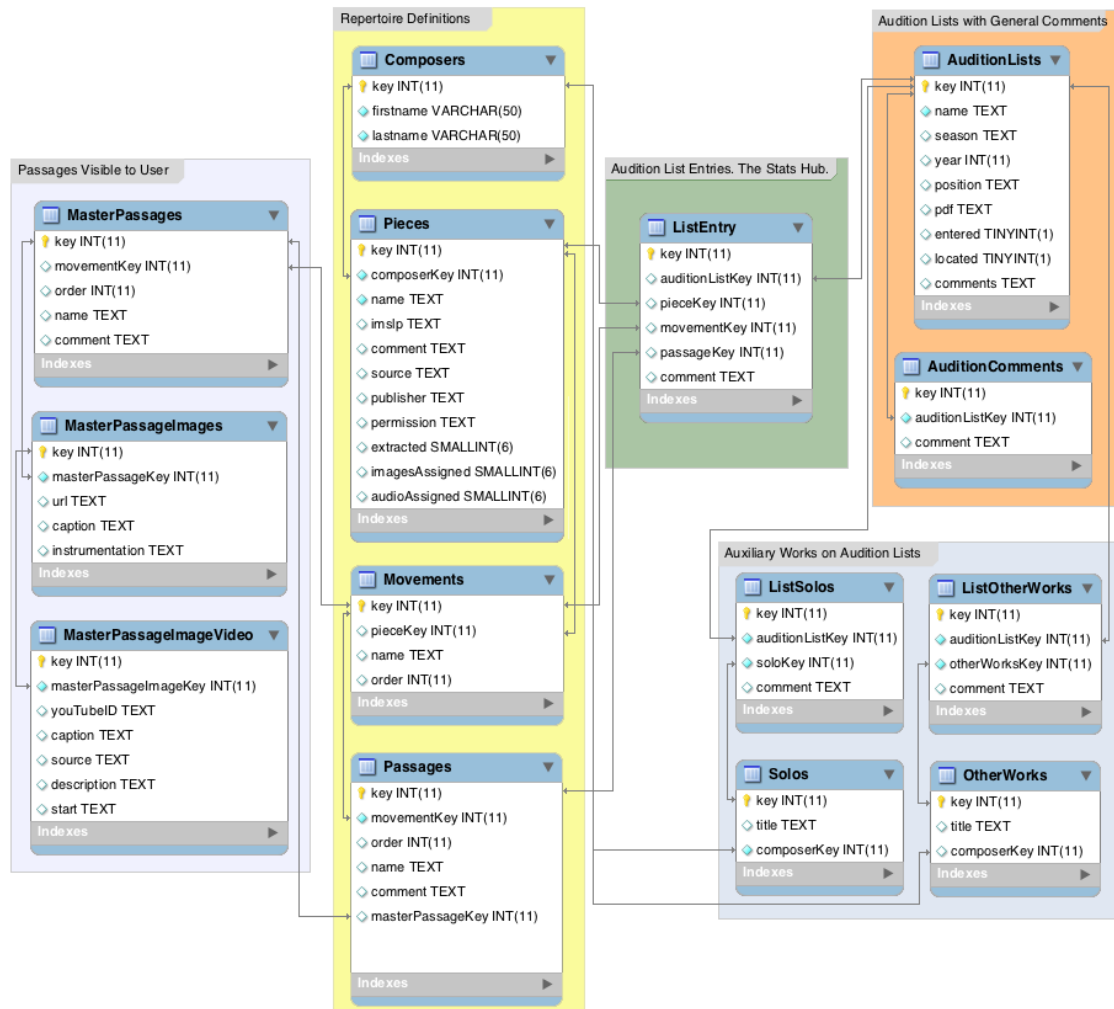
- Data for each table can be created, updated, and deleted
- Records from one table can be assigned (i.e., related) to records in another table

A brief explanation of each table and examples of the VTEO Data Editor are presented in the following sections:

- A brief explanation of each table
- Selected “VTEO Data Editor” examples
- Sample output of the MySQL to JavaScript database conversion process

VTEO Database Diagram and Table Explanations

Figure 7.2. Diagram of the VTEO database



Composers

This is a simple table of composers extracted from surveyed audition lists.

Pieces

Pieces are tied to the *Composers* table via *composerKey*. The fields *comment*, *source*, *publisher*, *permission*, *extracted*, *imagesAssigned* and *audioAssigned* serve as programmer aids.

Movements

Each movement of each piece is stored in this table, whether or not any given movement has a corresponding excerpt. For programming purposes, if a piece is not a multi-movement work, a single movement (with the simple name of “1”) is assigned. A *Movement* record is needed to associate each *Passage* record with a piece.

Passages

Each record in the *Passages* table represent a specific passage found on an audition list. Some records may overlap or differ from each other by only a few measures. Each differing record is stored for statistical reporting. The site hides these granular statistics to prevent the user from statistical overload. They are included in Appendix 3: Compiled Data and Statistics.

MasterPassages

This table determines what passages the visitor actually sees on the screen. Whereas the *Passages* table contains all the list variants, a *MasterPassage* encapsulates and normalizes the variants into what becomes the visual image. Records from the *Passages* table are tied to their corresponding *MasterPassage* records in order to calculate statistics. How often is a *Passage* in any of its varieties requested? The statistics are calculated by examining the *Passages* tied to the visible *MasterPassage*. In essence, the *Passages* table is used for granular statistical use and *MasterPassages* is used to determine what the user will see.

MasterPassageImages

The filename of each excerpt image is stored in this table. Each image is tied to a *MasterPassage*. Note that multiple images may be connected to one *MasterPassage*. This allows for the assignment of different editions of the same passage to one parent *MasterPassage*.

MasterPassageImageVideo

YouTube video links are assigned to a *MasterPassageImage* and stored in this table. Multiple video records may be assigned to one image.

AuditionLists

General information for each acquired list is stored in this table.

AuditionListComments

Comments found on each list, such as “sight-reading may be required” or “this orchestra tunes to A442” are stored in this table.

Solos and OtherWorks

These two tables store auxiliary data. The *Solos* table holds records for solos that are requested on audition lists. *OtherWorks* stores other non-orchestral and non-solo works (the only one being Ewald’s Brass Quintet No.1).

ListSolos and ListOtherWorks

These are “assign tables” that are used to link solos and other works to specific audition lists.

ListEntry

This table is the central hub for tying audition list entries to repertoire. Whether a list calls for an entire work, an entire movement, or a specific passage, ListEntry connects the list entry to a record in the *Pieces*, *Movements*, or *Passages* tables accordingly. Each *ListEntry* record may also store a comment. For example, “do not use mute” appears on a handful of lists that call for the lyrical muted trumpet solo from Shostakovich’s Concerto for Piano and Strings.

Selected “VTEO Data Editor” Examples

Figure 7.3. The “VTEO Data Editor” simple record data entry form

The screenshot displays the VTEO Data Editor interface. On the left is a sidebar with a 'Build Repertoire' section containing buttons for Composers, Pieces, Movements, Passages, Master Passages, Solos, and Other Works. Below this are buttons for Audition List Management, Assign Forms, Master Passage Media, and Maintenance Tools. The main area is titled 'Pieces' and features an 'Available Pivot' dropdown set to 'Mahler, Gustav'. Below this is a list of 'Existing Pieces' including 'Das Lied von der Erde' and Symphonies No. 1 through 9, with 'Symphony No. 5' selected. To the right of the list are 'Edit' and 'Delete' buttons. On the far right is an 'Edit Record' form with fields for Name (Symphony No.5), IMSLP Link (http://imslp.org/wiki/Syn), Comment, Source (PD IMSLP), Publisher (PD), Permission, Extracted (1), Images Assigned (1), and Audio Assigned (1). The form includes 'Update' and 'Cancel' buttons at the bottom.

Add, edit, and delete

Each record pertaining to repertoire, media, and audition list information is entered using simple forms such as the one in figure 7.3. In this example, details of Mahler’s Symphony No.5 are entered into this form, which in turn is stored in the *Pieces*

table. A related composer is selected from the “Available Pivots” dropdown. A piece can then be edited or created by entering data in the form to the right. The majority of tables in the database are maintained in the same manner. This type of relationship between one parent record with multiple child records (such as one composer being tied to multiple pieces) is known in relational database lingo as a “one-to-many relationship.”

Assign forms: Linking multiple records to multiple parent records

Figure 7.4. A typical “VTEO Data Editor” assign form

VTEO Data Editor

- Build Repertoire
- Audition List Management
- Assign Forms
 - Assign Audition List Entries
 - Assign Solos
 - Assign Other Works
- Master Passage Media
- Maintenance Tools

Assign Audition List Entries

Available Targets: New York Philharmonic (Early, 2006)

Available

www.crescendo.org:intermag:opening - 1
 MVT: Tchaikovsky, Piotr: Swan Lake, Op.20 - Neopolitan Dance
 MVT: Tchaikovsky, Piotr: Symphony No.4, Op.36 - 1. Andante sostenuto
 MVT: Tchaikovsky, Piotr: Symphony No.4, Op.36 - 2. Andantino in modo di canzone
 MVT: Tchaikovsky, Piotr: Symphony No.4, Op.36 - 3. Scherzo: Pizzicato ostinato
 MVT: Tchaikovsky, Piotr: Symphony No.4, Op.36 - 4. Finale: Allegro con fuoco
 MVT: Tchaikovsky, Piotr: The Nutcracker, Op.71 - Chocolate
 MVT: Wagner, Richard: Goetterdaemmerung, WWV 86D - Siegfried's Funeral March
 MVT: Wagner, Richard: Overture to Tannhaeuser, WWV 70 - 1
 MVT: Wagner, Richard: Parsifal, WWV 111 - Prelude
 MVT: Wagner, Richard: Ride of the Valkyries, WWV 86B - III. Aufzug
 MVT: Webern, Anton: Passacaglia, Op.1 - 1
 MVT: Williams, John: Summon the Heroes - 1
 PSG: Adams, John: City Noir - 3. Boulevard Night > Solo, 29 - 56
 PSG: Adams, John: Doctor Atomic - 1. The Laboratory > "" 228 - 265
 PSG: Adams, John: Doctor Atomic - 1. The Laboratory > "" 583 - End
 PSG: Bach, J. S.: B Minor Mass - 12. Cum sancto spiritu > 25 - 37; last 7 bars
 PSG: Bach, J. S.: B Minor Mass - 13. Credo > "" 29 - End
 PSG: Bach, J. S.: B Minor Mass - 13. Credo > 29 - 47
 PSG: Bach, J. S.: Brandenburg Concerto No.2, BWV 1047 - 1. Allegro > "" 1 - 37
 PSG: Bach, J. S.: Christmas Oratorio, BWV 248 - 64. Choral > "" Beginning - 13
 PSG: Bach, J. S.: Christmas Oratorio, BWV 248 - 64. Coro > Beginning to [A]
 PSG: Bach, J. S.: Magnificat - 1. Magnificat > Opening to 15
 PSG: Bach, J. S.: Magnificat - 1. Magnificat > Opening to 32

Assigned

PCE: Respighi, Ottorino: Pines of Rome
 PCE: Rimsky-Korsakov, Nikolai: Scheherazade, Op.35
 PCE: Schumann, Robert: Symphony No.2, Op.61
 PCE: Scriabin, Alexander: Poem of Ecstasy (Symphony No.4)
 PCE: Shostakovich, Dmitri: Concerto for Trumpet, Piano and Strings
 PCE: Strauss, Richard: Also Sprach Zarathustra, Op.30
 PCE: Strauss, Richard: Ein Heldenleben, Op.40
 PCE: Strauss, Richard: Till Eulenspiegel, Op.40
 PCE: Stravinsky, Igor: Petrushka (1947 version)
 PCE: Stravinsky, Igor: Song of the Nightingale
 PCE: Tchaikovsky, Piotr: Symphony No.4, Op.36
 MVT: Bach, J. S.: Christmas Oratorio, BWV 248 - 64. Choral
 MVT: Gershwin, George: Piano Concerto in F Major - 2. Adagio - Andante con moto
 MVT: Mussorgsky, Modest (Ravel): Pictures at an Exhibition - 6. Samuel Goldenberg und Schmuyle
 PSG: Bizet, Georges: Carmen Suite No.1 - Prelude: Act I. Prelude: 'Fate' motive > Opening Solo
 PSG: Dvorak, Antonin: Symphony No.9, Op.95 - 4. Allegro con fuoco > Opening Theme, 10 - 25
 PSG: Mahler, Gustav: Symphony No.3 - 3. Comodo (Scherzando) > Posthorn Solo (1 before [14] - [17])
 PSG: Respighi, Ottorino: Pines of Rome - 2. Pines near a Catacomb > Offstage Solo, 17 - 26
 PSG: Schumann, Robert: Symphony No.2, Op.61 - 1. Sostenuto assai - Allegro, ma non troppo > Opening chorale, Beginning - 14
 PSG: Shostakovich, Dmitri: Concerto for Trumpet, Piano and Strings - 2. Lento > [34] - [35]
 PSG: Strauss, Richard: Also Sprach Zarathustra, Op.30 - 1 > 8 before [51] - [52]
 PSG: Strauss, Richard: Till Eulenspiegel, Op.28 - 1 > [36] - 16 after [37]
 PSG: Stravinsky, Igor: Petrushka (1947 version) - Tableau III: The Moor's Room > 1 before [134] - [139]

Comment for Selected

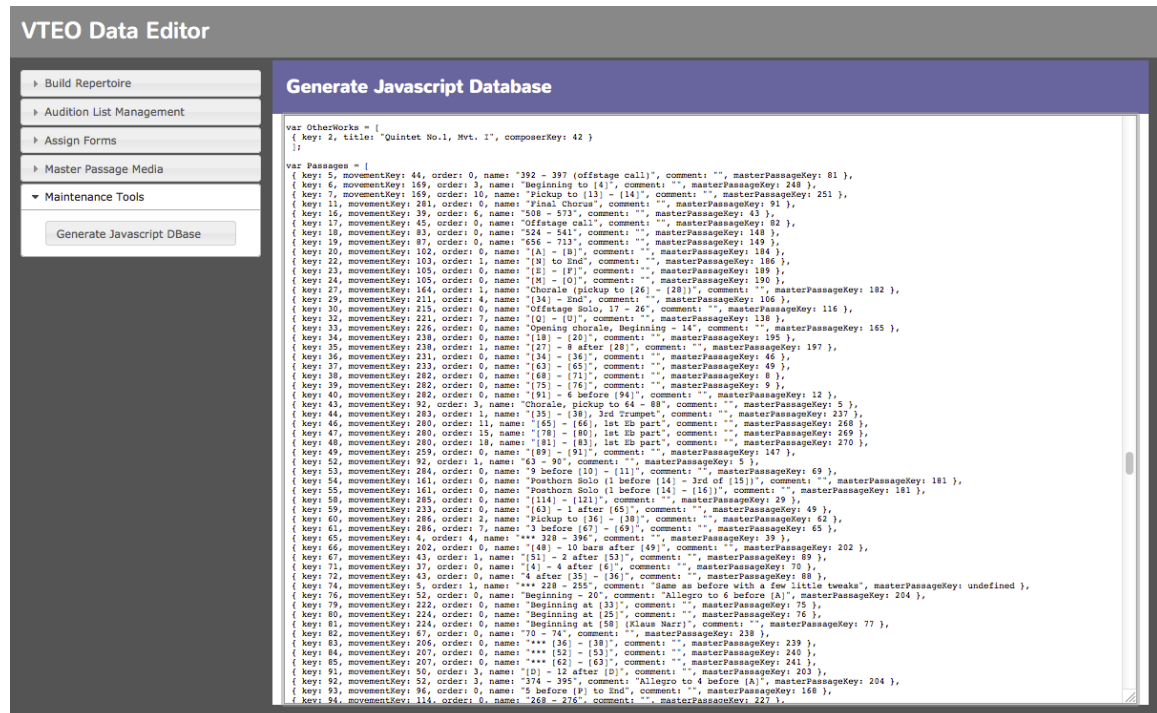
Update Comment

Figure 7.4 presents an “assign form” – a tool used to create a relationship between multiple records and multiple parent record. The “Assign Audition List Entries” is a good example of an assign form. All other assign forms follow the same pattern. In this example, an audition list for the New York Philharmonic is selected from the “Available Targets” dropdown. From there, all available pieces, movements, and specific passages appear in the list to the left. All entries on the audition list are then assigned to it by selecting the appropriate pieces, movements, and/or passages and then clicking the right arrow button located between the two lists. Once an available entry is selected and moved

to the list on the right, it is “linked” to the selected audition list. Records that are already assigned to one audition list may also be assigned to other audition lists. In relational database parlance, this is known as a “many-to-many relationship.”

MySQL to JavaScript database conversion

Figure 7.5. Sample output of the MySQL to JavaScript data conversion process



In order for the offline version of VTEO to work, a static offline database representation is used. Since JavaScript is able to run in a user’s web browser, even while offline, a large JavaScript array of key/value pairs is used to store the data. Converting the data from the full-fledged MySQL database (for the online version) to a JavaScript representation of the data (for the offline version) is the task of the “Generate JavaScript Dbase” function. The routine traverses the MySQL database and creates the JavaScript

array stored in /Scripts/database.js,⁴ which is then accessed by various functions in the /Scripts/business.js file. Figure 7.5 shows a portion of the output created by the generator. The /Scripts/database.js file serves as the bridge between the site's offline and online versions. It allows the offline version of VTEO to maintain and manipulate a large database. Once online, this feature will no longer be needed since all data will be accessed directly from the MySQL database.

⁴ The \Scripts\database.js file consists of a few more than 5,000 lines of data representing the MySQL database.

Appendix 3: COMPILED DATA AND STATISTICS

The following tables and figures represent data extracted from surveyed audition lists, their corresponding entries, and basic statistical analysis based off of those entries.⁵

The following data is represented:

- Website Content Totals
- Audition List Overview
- Audition Lists Acquired and Surveyed
- Missing Audition Lists
- Position Openings from All Lists
- Sight Reading Mentioned
- Sight Reading per year
- Rotary Trumpet Preference
- Rotary Preference Rate per Year
- Solo Rate by Exact Entry
- Orchestra Works Sorted by Rate
- Orchestral Works Sorted by Composer
- Works Requested in the Entirety Only
- Rate of Works Requested in Their Entirety
- Rate of Passages as They Appear in Surveyed Lists

Table 7.1. Website content totals

Viewable passages	311
Videos assigned	598
Composers of orchestral works	40
Composers of other works	10
Number of orchestral works represented	110

⁵ On the online version of VTEO, this information will be available as real-time queried data, which will allow visitors to see updated information whenever existing content is updated or new data is added.

Table 7.2. Total audition lists consulted

Year span	2003 – 2013
Total lists	66
Total lists acquired	53
Total lists analyzed	53

Table 7.3. Audition lists acquired and surveyed

Ensemble	Month	Year	Position
Chicago Symphony	Fall	2003	Principal Trumpet
Dallas Symphony	Apr	2003	Associate Principal/Third Trumpet
San Francisco Symphony	Spring	2003	Associate Principal Trumpet
St. Louis Symphony	Spring	2003	Second Trumpet
Utah Symphony	Fall	2003	Associate Principal Trumpet
Dallas Symphony	Spring	2004	Associate Principal/Third Trumpet
Dallas Symphony	Spring	2004	Principal Trumpet
Houston Symphony	Spring	2004	Principal Trumpet
Indianapolis Symphony	Spring	2004	Third/Assistant Principal/Utility Trumpet
New York Philharmonic	Spring	2004	Associate Principal Trumpet
Atlanta Symphony	Spring	2005	Associate Principal/Third Trumpet
Cleveland Symphony	Oct	2005	Fourth/Utility Trumpet
Colorado Symphony	May	2005	Principal Trumpet
LA Philharmonic	Oct	2005	Second Trumpet
National Symphony	Jan	2005	Second Trumpet
Oregon Symphony	Fall	2005	Principal Trumpet
San Diego Symphony	Fall	2005	Substitute Principal Trumpet
San Francisco Symphony	Jan	2005	Principal Trumpet
Atlanta Symphony	May	2006	Principal Trumpet
Boston Symphony	Jan-Feb	2006	Principal Trumpet
Houston Symphony	Spring	2006	Principal Trumpet
New York Philharmonic	Early	2006	Associate Principal/3rd and 2nd Trumpet
Atlanta Symphony	Sep	2007	Associate Principal Trumpet
Baltimore Symphony	Spring	2007	Second Trumpet
Boston Symphony	Oct-Nov	2007	Assistant Principal/Third Trumpet
Colorado Symphony	Jun	2007	Principal Trumpet
Colorado Symphony	Nov	2007	Principal Trumpet
New York Philharmonic		2007	Second Trumpet
Boston Symphony	Oct	2008	Assistant Principal/Third Trumpet

Ensemble	Month	Year	Position
Cincinnati Symphony	Jan	2008	Principal Trumpet
Colorado Symphony	May	2008	Principal Trumpet
San Francisco Symphony	Feb	2008	Principal Trumpet
Boston Symphony	Oct	2009	Assistant Principal/Third Trumpet
Indianapolis Symphony	Jan-Feb	2009	Principal Trumpet
Atlanta Symphony	Jun	2010	Second/Utility Trumpet
Boston Symphony	Jan-Feb	2010	Second Trumpet
Detroit Symphony	May-Jun	2010	Principal Trumpet
San Francisco Symphony	Jan-Feb	2010	Second Trumpet
San Francisco Symphony	Oct	2010	Third Trumpet
St. Louis Symphony	Jan-Mar	2010	Principal Trumpet
Detroit Symphony	Nov	2011	Principal Trumpet
LA Philharmonic	Jan	2011	Third/Utility Trumpet
LA Philharmonic	Jul	2011	Principal Trumpet
National Symphony	Summer	2011	Principal Trumpet
St. Louis Symphony	Spring	2011	Principal Trumpet
Atlanta Symphony	Feb-May	2012	Principal Trumpet
Indianapolis Symphony	Feb-Mar	2012	Principal Trumpet
San Francisco Symphony	May-Jun	2012	Second Trumpet
Utah Symphony	Sep	2012	Principal Trumpet
Atlanta Symphony	May-Jun	2013	Principal Trumpet
Baltimore Symphony	Mar	2013	Second Trumpet
Milwaukee Symphony	Jan	2013	Associate Principal/Third Trumpet
San Francisco Symphony	Jan	2013	Associate Principal Trumpet

Table 7.4. Audition lists not acquired

Ensemble	Month	Year	Position
Colorado Symphony	Sep	2003	Principal Trumpet
Baltimore Symphony	Jan	2004	Second Trumpet
Chicago Symphony	Fall	2004	Principal Trumpet
LA Philharmonic	Nov	2006	Second Trumpet
San Francisco Symphony	Jan	2007	Principal Trumpet
Oregon Symphony	Sep	2008	Third/Utility Trumpet
Cleveland Orchestra	Jan	2009	Assistant Principal Trumpet
Baltimore Symphony	Sep	2009	2nd Trumpet and 4th Trumpet Sub
St. Louis Symphony	Jan-Mar	2009	Principal Trumpet
Atlanta Symphony	Mar	2010	Associate Principal/Utility Trumpet
San Diego Symphony	Dec	2011	Third Trumpet

Ensemble	Month	Year	Position
Detroit Symphony	N/A	2012	Principal Trumpet
National Symphony	“Summer”	2012	Principal Trumpet

Table 7.5. Open positions from all lists, 2003 to 2013

Position	Openings
Principal Trumpet Auditions	31
Associate Principal Trumpet Combinations (with 2nd and/or 3rd)	11
Assistant Principal Trumpet Combinations (with 2nd and/or 3rd)	5
Second Trumpet	13
Third Trumpet	4
Fourth Trumpet	1
Substitute Principal Trumpet	1
Fourth Trumpet/Substitute	1

Table 7.6. Sight-reading mentioned on lists

Yes	73.6%
No Mention	26.4%

Table 7.7. Sight-reading mentioned by year

Year	Rate
2003	60%
2004	40%
2005	75%
2006	100%
2007	67%
2008	100%
2009	100%
2010	67%
2011	100%
2012	100%
2013	25%

Table 7.8. Rotary trumpet preference/required

Yes	39.6%
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No Mention	60.4%
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Table 7.9. Rotary trumpet preference/required by year

Year	Rate
2003	20%
2004	20%
2005	13%
2006	50%
2007	33%
2008	25%
2009	50%
2010	50%
2011	60%
2012	75%
2013	75%

Table 7.10. Solo popularity by entry, movements included

Composer	Piece	Rate
Haydn	Concerto in Eb Major, Movement I	30%
Haydn	Concerto in Eb Major, Movement II	26%
Haydn	Concerto in Eb Major	15%
Hummel	Concerto in Eb/E major	15%
Honegger	Intrada	11%
Hindemith	Sonata for Trumpet and Piano, Movement I	8%
Charlier	Trente-six Etudes Transcendantes, No.6	6%
Hummel	Trumpet Concerto in Eb Major, Movement I	6%
Snedecor	Lyrical Etudes for Trumpet, No.6	6%
Tomasi	Trumpet Concerto	6%
Charlier	Trente-six Etudes Transcendantes, No.2	4%
Haydn	Concerto in Eb Major, Movement III	4%
Hummel	Trumpet Concerto in Eb Major, Movement II	4%
Hummel	Trumpet Concerto in Eb Major, Movement III	4%
Bitsch	Vingt Etudes, No.5	2%
Broughton	Oliver's Birthday	2%
Charlier	Trente-six Etudes Transcendantes, No.4	2%
Hindemith	Sonata for Trumpet and Piano	2%
Snedecor	Lyrical Etudes for Trumpet, No.18	2%

Table 7.11. Orchestral works by rate

Composer	Piece	Rate
Stravinsky	Petrouchka (1947 version)	96%
Mussorgsky	Pictures at an Exhibition	92%
Respighi	Pines of Rome	87%
Mahler	Symphony No.5	81%
Schumann	Symphony No.2, Op.61	81%
Bartók	Concerto for Orchestra, Sz. 116	72%
Strauss	Ein Heldenleben, Op.40	72%
Rimsky-Korsakov	Scheherazade, Op.35	66%
Ravel	Piano Concerto in G Major	64%
Gershwin	Piano Concerto in F Major	57%
Mahler	Symphony No.3	55%
Brahms	Academic Festival Overture, Op.80	49%
Beethoven	Leonore Overture No.3, Op.72b	43%
Wagner	Parsifal	42%
Shostakovich	Concerto for Trumpet, Piano and Strings	38%
Bizet	Carmen Suite No.1	34%
Bach	B Minor Mass	30%
Bach	Magnificat	28%
Bruckner	Symphony No.7 in E major	28%
Copland	An Outdoor Overture	28%
Mahler	Symphony No.2	28%
Strauss	Don Juan, Op.20	26%
Brahms	Symphony No.2, Op.73	25%
Beethoven	Symphony No.5, Op.67	23%
Stravinsky	The Firebird	23%
Bach	Christmas Oratorio, BWV 248	21%
Debussy	Fêtes (Nocturnes: II)	21%
Shostakovich	Symphony No.5	21%
Strauss	Till Eulenspiegel, Op.28	21%
Beethoven	Leonore Overture No.2, Op.72a	19%
Beethoven	Symphony No.9, Op.125	17%
Dvořák	Symphony No.8	17%
Gershwin	An American in Paris	17%
Mahler	Symphony No.1	17%
Strauss	Alpine Symphony, Op.64	17%
Tchaikovsky	Symphony No.4, Op.36	17%

Bartók	Miraculous Mandarin	15%
Debussy	La Mer	15%
Prokofiev	Symphony No.5, Op.100	15%
Strauss	Don Quixote, Op.35	15%
Wagner	Overture to Tannhäuser	15%
Strauss	Also Sprach Zarathustra, Op.30	13%
Stravinsky	A Soldier's Tale	13%
Bruckner	Symphony No.4	11%
Scriabin	Poem of Ecstasy	11%
Tchaikovsky	Swan Lake	11%
Wagner	Götterdämmerung	11%
Dvořák	Symphony No.9, Op.95	9%
Ravel	Alborada Graziosa	9%
Strauss	Der Bürger als Edelmann, Op.60	9%
Beethoven	Violin Concerto, Op.61	8%
Bernstein	Symphonic Dances from West Side Story	8%
Copland	Symphony No.3	8%
Mahler	Symphony No.7	8%
Ravel	Bolero	8%
Ravel	Rapsodie Espagnole	8%
Stravinsky	Song of the Nightingale	8%
Bartók	Concerto for Piano No.2, Sz.95	6%
Beethoven	Piano Concerto No.1, Op.15	6%
Britten	Four Sea Interludes from Peter Grimes	6%
Prokofiev	Cinderella Suite No.1	6%
Ravel	Daphni & Chloe Suite No.2	6%
Shostakovich	Symphony No.1	6%
Shostakovich	Symphony No.8	6%
Strauss	Symphonia Domestica	6%
Tchaikovsky	The Nutcracker	6%
Adams	Doctor Atomic	4%
Berg	Violin Concerto	4%
Berlioz	Roman Carnival Overture	4%
Berlioz	Symphony Fantastique	4%
Britten	Young Person's Guide to the Orchestra	4%
Copland	Rodeo	4%
Franck	Symphony in D minor	4%
Mahler	Symphony No.4	4%
Mahler	Symphony No.8	4%
Rachmaninoff	Rhapsody on a Theme of Paganini	4%

Wagner	Ride of the Valkyries	4%
Webern	Passacaglia	4%
Bach	Brandenburg Concerto No.2, BWV 1047	2%
Bach	Sarabande	2%
Barber	First Essay for Orchestra	2%
Barber	Symphony No.1	2%
Beethoven	Symphony No.8	2%
Berg	Kammerkonzert	2%
Berg	Lulu Suite	2%
Berg	Wozzeck	2%
Britten	Sinfonia da requiem	2%
Bruckner	Symphony No.8 in C minor	2%
Bruckner	Symphony No.9 in D minor	2%
Copland	Quiet City	2%
Cowell	Synchrony	2%
Dvořák	Cello Concerto, Op.104	2%
Handel	Water Music	2%
Harbison	Concerto for Double Brass Choir & Orchestra	2%
Mahler	Das Lied von der Erde	2%
Mahler	Symphony No.6	2%
Mahler	Symphony No.9	2%
Mozart	Three German Dances, K.605	2%
Prokofiev	Lt. Kijé Suite	2%
Prokofiev	Violin Concerto No.2	2%
Rachmaninoff	Symphony No.3	2%
Schoenberg	Gurrelieder	2%
Schoenberg	Theme and Variations, Op. 43b	2%
Shostakovich	Symphony No.9	2%
Sibelius	Symphony No.2	2%
Strauss	Death and Transfiguration	2%
Strauss	Der Rosenkavalier Suite	2%
Stravinsky	Pulcinella	2%
Stravinsky	The Right of Spring	2%
Williams	Summon the Heroes	2%

Table 7.12. Orchestral works by composer

Composer	Piece	Rate
Adams	Doctor Atomic	4%
Bach	B Minor Mass	30%

Composer	Piece	Rate
Bach	Brandenburg Concerto No.2, BWV 1047	2%
Bach	Christmas Oratorio, BWV 248	21%
Bach	Magnificat	28%
Bach	Sarabande	2%
Barber	First Essay for Orchestra	2%
Barber	Symphony No.1	2%
Bartók	Concerto for Orchestra, Sz. 116	72%
Bartók	Concerto for Piano No.2, Sz.95	6%
Bartók	Miraculous Mandarin	15%
Beethoven	Leonore Overture No.2, Op.72a	19%
Beethoven	Leonore Overture No.3, Op.72b	43%
Beethoven	Piano Concerto No.1, Op.15	6%
Beethoven	Symphony No.5, Op.67	23%
Beethoven	Symphony No.8	2%
Beethoven	Symphony No.9, Op.125	17%
Beethoven	Violin Concerto, Op.61	8%
Berg	Kammerkonzert	2%
Berg	Lulu Suite	2%
Berg	Violin Concerto	4%
Berg	Wozzeck	2%
Berlioz	Roman Carnival Overture	4%
Berlioz	Symphony Fantastique	4%
Bernstein	Symphonic Dances from West Side Story	8%
Bizet	Carmen Suite No.1	34%
Brahms	Academic Festival Overture, Op.80	49%
Brahms	Symphony No.2, Op.73	25%
Britten	Four Sea Interludes from Peter Grimes	6%
Britten	Sinfonia da requiem	2%
Britten	Young Person's Guide to the Orchestra	4%
Bruckner	Symphony No.4	11%
Bruckner	Symphony No.7 in E major	28%
Bruckner	Symphony No.8 in C minor	2%
Bruckner	Symphony No.9 in D minor	2%
Copland	An Outdoor Overture	28%
Copland	Quiet City	2%
Copland	Rodeo	4%
Copland	Symphony No.3	8%
Cowell	Synchrony	2%
Debussy	Fêtes (Nocturnes: II)	21%

Composer	Piece	Rate
Debussy	La Mer	15%
Dvořák	Cello Concerto, Op.104	2%
Dvořák	Symphony No.8	17%
Dvořák	Symphony No.9, Op.95	9%
Franck	Symphony in D minor	4%
Gershwin	An American in Paris	17%
Gershwin	Piano Concerto in F Major	57%
Handel	Water Music	2%
Harbison	Concerto for Double Brass Choir & Orchestra	2%
Mahler	Das Lied von der Erde	2%
Mahler	Symphony No.1	17%
Mahler	Symphony No.2	28%
Mahler	Symphony No.3	55%
Mahler	Symphony No.4	4%
Mahler	Symphony No.5	81%
Mahler	Symphony No.6	2%
Mahler	Symphony No.7	8%
Mahler	Symphony No.8	4%
Mahler	Symphony No.9	2%
Mozart	Three German Dances, K.605	2%
Mussorgsky	Pictures at an Exhibition	92%
Prokofiev	Cinderella Suite No.1	6%
Prokofiev	Lt. Kijé Suite	2%
Prokofiev	Symphony No.5, Op.100	15%
Prokofiev	Violin Concerto No.2	2%
Rachmaninoff	Rhapsody on a Theme of Paganini	4%
Rachmaninoff	Symphony No.3	2%
Ravel	Alborada Grazioso	9%
Ravel	Bolero	8%
Ravel	Daphni & Chloe Suite No.2	6%
Ravel	Piano Concerto in G Major	64%
Ravel	Rapsodie Espagnole	8%
Respighi	Pines of Rome	87%
Rimsky-Korsakov	Scheherazade, Op.35	66%
Schoenberg	Gurrelieder	2%
Schoenberg	Theme and Variations, Op. 43b	2%
Schumann	Symphony No.2, Op.61	81%
Scriabin	Poem of Ecstasy	11%
Shostakovich	Concerto for Trumpet, Piano and Strings	38%

Composer	Piece	Rate
Shostakovich	Symphony No.1	6%
Shostakovich	Symphony No.5	21%
Shostakovich	Symphony No.8	6%
Shostakovich	Symphony No.9	2%
Sibelius	Symphony No.2	2%
Strauss	Alpine Symphony, Op.64	17%
Strauss	Also Sprach Zarathustra, Op.30	13%
Strauss	Death and Transfiguration	2%
Strauss	Der Bürger als Edelmann, Op.60	9%
Strauss	Der Rosenkavalier Suite	2%
Strauss	Don Juan, Op.20	26%
Strauss	Don Quixote, Op.35	15%
Strauss	Ein Heldenleben, Op.40	72%
Strauss	Symphonia Domestica	6%
Strauss	Till Eulenspiegel, Op.28	21%
Stravinsky	A Soldier's Tale	13%
Stravinsky	Petrouchka (1947 version)	96%
Stravinsky	Pulcinella	2%
Stravinsky	Song of the Nightingale	8%
Stravinsky	The Firebird	23%
Stravinsky	The Right of Spring	2%
Tchaikovsky	Swan Lake	11%
Tchaikovsky	Symphony No.4, Op.36	17%
Tchaikovsky	The Nutcracker	6%
Wagner	Götterdämmerung	11%
Wagner	Overture to Tannhäuser	15%
Wagner	Parsifal	42%
Wagner	Ride of the Valkyries	4%
Webern	Passacaglia	4%
Williams	Summon the Heroes	2%

Table 7.13. Works requested only in their entirety

Composer	Work
Bartok	Concerto for Piano No.2, Sz.95
Beethoven	Piano Concerto No.1, Op.15
Beethoven	Symphony No.8, Op.93
Beethoven	Violin Concerto, Op.61
Berg	Kammerkonzert

Composer	Work
Berg	Wozzeck, Op.7
Britten	Young Person's Guide to the Orchestra
Dvorak	Cello Concerto, Op.104
Franck	Symphony in D minor
Handel	Water Music, HWV 348-350
Mahler	Das Lied von der Erde
Mahler	Symphony No.8
Mahler	Symphony No.9
Mozart	Three German Dances, K.605
Ravel	Daphnis & Chloe Suite No.2
Sibelius	Symphony No.2, Op.43
Strauss	Death and Transfiguration, Op.24
Stravinsky	Pulcinella
Stravinsky	The Right of Spring
Tchaikovsky	Swan Lake, Op.20
Tchaikovsky	The Nutcracker, Op.71
Wagner	Ride of the Valkyries, WWV 86B

Table 7.14. Rate of works requested in their entirety

Composer	Work	Rate
Bach	B Minor Mass	2%
Bach	Christmas Oratorio, BWV 248	4%
Bach	Magnificat	6%
Bartok	Concerto for Orchestra, Sz. 116	26%
Bartok	Concerto for Piano No.2, Sz.95	2%
Bartok	Miraculous Mandarin	6%
Beethoven	Leonore Overture No.2, Op.72a	6%
Beethoven	Leonore Overture No.3, Op.72b	8%
Beethoven	Piano Concerto No.1, Op.15	6%
Beethoven	Symphony No.5, Op.67	8%
Beethoven	Symphony No.9, Op.125	8%
Beethoven	Violin Concerto, Op.61	8%
Berg	Kammerkonzert	2%
Berg	Wozzeck, Op.7	2%
Berlioz	Roman Carnival Overture, H.95	2%
Bernstein	Symphonic Dances from West Side Story	2%
Bizet	Carmen Suite No.1	2%
Brahms	Academic Festival Overture, Op.80	19%

Composer	Work	Rate
Brahms	Symphony No.2, Op.73	11%
Britten	Four Sea Interludes from Peter Grimes	2%
Bruckner	Symphony No.4 in Eb major	2%
Bruckner	Symphony No.7 in E major	9%
Copland	An Outdoor Overture	4%
Copland	Quiet City	2%
Debussy	Fetes (Nocturnes: II)	8%
Debussy	La Mer	8%
Dvorak	Cello Concerto, Op.104	2%
Dvorak	Symphony No.8, Op.88	9%
Dvorak	Symphony No.9, Op.95	4%
Franck	Symphony in D minor	4%
Gershwin	An American in Paris	9%
Gershwin	Piano Concerto in F Major	8%
Handel	Water Music, HWV 348-350	2%
Mahler	Das Lied von der Erde	2%
Mahler	Symphony No.1	8%
Mahler	Symphony No.2	15%
Mahler	Symphony No.3	8%
Mahler	Symphony No.5	17%
Mahler	Symphony No.7	2%
Mahler	Symphony No.8	4%
Mussorgsky	Pictures at an Exhibition	19%
Prokofiev	Lt. Kije Suite	2%
Ravel	Alborada Grazioso	4%
Ravel	Bolero	6%
Ravel	Daphnis & Chloe Suite No.2	6%
Ravel	Piano Concerto in G Major	13%
Ravel	Rapsodie Espagnole	6%
Respighi	Pines of Rome	25%
Rimsky-Korsakov	Scheherazade, Op.35	19%
Schumann	Symphony No.2, Op.61	17%
Scriabin	Poem of Ecstasy (Symphony No.4)	11%
Shostakovich	Concerto for Trumpet, Piano and Strings	11%
Shostakovich	Symphony No.1	2%
Shostakovich	Symphony No.5	4%
Sibelius	Symphony No.2, Op.43	2%
Strauss	Alpine Symphony, Op.64	6%
Strauss	Also Sprach Zarathustra, Op.30	8%

Composer	Work	Rate
Strauss	Death and Transfiguration, Op.24	2%
Strauss	Der Buerger als Edelmann, Op.60	8%
Strauss	Don Juan, Op.20	15%
Strauss	Don Quixote, Op.35	6%
Strauss	Ein Heldenleben, Op.40	47%
Strauss	Till Eulenspiegel, Op.28	11%
Stravinsky	A Soldier's Tale	2%
Stravinsky	Petrouchka (1947 version)	23%
Stravinsky	Pulcinella	2%
Stravinsky	Song of the Nightingale	4%
Stravinsky	The Firebird	6%
Stravinsky	The Right of Spring	2%
Tchaikovsky	Swan Lake, Op.20	2%
Tchaikovsky	Symphony No.4, Op.36	11%
Wagner	Parsifal, WWV 111	6%
Wagner	Ride of the Valkyries, WWV 86B	4%

Table 7.15. Rate of passages as they appear in surveyed lists

Composer	Work	Movement	Passage	Rate
Adams	City Noir	3. Boulevard Night	Solo, 29 - 56	2%
			228 - 265	4%
			583 - End	4%
Bach	B Minor Mass	12. Cum sancto spiritu	25 - 37; last 7 bars	2%
			29 - End	6%
			29 - 47	6%
	Brandenburg Concerto No.2	1. Allegro	1 - 37	2%
	Christmas Oratorio	64. Choral	Beginning - 13	8%
	Magnificat	1. Magnificat	Beginning to 15	6%
			Beginning to 32	9%
			Beginning to 49	6%
Barber	First Essay for Orchestra		[4] - 4 after [6]	2%
	Symphony No.1	Symphony in One Movement	[14] - [15]	2%
			7 after [27] - 4 after [28]	2%
			7 after [46] - [48]	2%
Bartok	Concerto for Orchestra, Sz. 116	1. Introduzione. Andante non troppo - Allegro vivace	39 - 50	17%
			334 - 396	11%
			313 - 396	2%
			1 before [359] - [396]	2%
			[35] - [51]	4%
			328 - 396	13%
		2. "Giuoco delle coppie". Allegretto scherzando	90 - 146	17%
			90 - 147	15%

Composer	Work	Movement	Passage	Rate
		5. Finale. Presto	228 - 255	4%
			201 - 231	6%
			201 - 248	2%
			201 - 255	11%
			211 - 249	2%
			211 - 254	2%
			211 - 256	28%
			508 - 573	9%
			512 - 573	4%
			535 - 572	6%
			549 - 573	6%
			550 - 572	8%
	Miraculous Mandarin	1 Act pantomime ballet	4 after [35] - [36]	2%
			[51] - 2 after [53]	9%
			3 before [67] - [71]	6%
			1 before [108] - 4 after [109]	2%
Beethoven	Leonore Overture No.2, Op.72a		392 - 397 (offstage call)	15%
	Leonore Overture No.3, Op.72b		Offstage call	36%
	Symphony No.5, Op.67	2. Andante con moto	[A] - 10 after [A]	2%
			[A] - 10 after [B]	2%
			[A] - 10 after [C]	2%
			[D] - 12 after [D]	2%
		4. Allegro	Beginning - 20	2%
			374 - 395	8%
	Symphony No.9, Op.125	4. Presto	[B] - 1 before [C]	6%

Composer	Work	Movement	Passage	Rate
			[B] - 15 after [C]	4%
Berg	Lulu Suite	1. Rondo - Hymne	129 - 135	2%
	Violin Concerto	1. Andante - Allegretto	70 - 74	4%
Berlioz	Roman Carnival Overture, H.95		[3] - [4]	2%
			10 before [8] - [8], 2nd Cornet	2%
	Symphony Fantastique, H.48	1. Reveries - Passions	[410] - [439], 2nd Cornet	2%
		2. A Ball	[31] - [35]	2%
Bernstein	Symphonic Dances from West Side Story	4. Mambo	524 - 541	6%
		7. "Cool"	656 - 713	4%
			Pickup to 679 - 700	2%
Bizet	Carmen Suite No.1	Prelude: Act I, Prelude: "Fate" motive	Beginning Solo	15%
Brahms	Academic Festival Overture, Op.80		63 - 89	8%
			63 - 90	6%
			63 - 92	4%
			Chorale, pickup to 64 - 88	13%
			Pickup to 367 to End	2%
	Symphony No.2, Op.73	1. Allegro non troppo	513 - End	6%
			13 after [H] - 4 before [I]	9%
		4. Allegro con spirito	5 before [P] to End	2%
Britten	Four Sea Interludes from Peter Grimes	2. Sunday Morning	[3] - [5]	2%
	Sinfonia da requiem	2. Dies irae	[22] - [24]	2%
Bruckner	Symphony No.4 in Eb major	1. Bewegt, nicht zu schnell	[A] - [B]	4%
		2. Andante, quasi allegretto	[E] - [F]	4%

Composer	Work	Movement	Passage	Rate
		3. Scherzo. Bewegt - Trio: Nicht zu schnell	Pickup to [A] to [B]	6%
			[N] to End	4%
		4. Finale: Bewegt, doch nicht zu schnell	[E] - [F]	6%
			[M] - [O]	4%
	Symphony No.7 in E major	1. Allegro moderato	91 - 98 (15 after [C] - 5 before [D])	9%
			139 - 149	6%
			141 - 149	2%
			233 - 246 ([M] - [N])	2%
			291 - 300	4%
			413 - End ([X] - End)	2%
			417 - 420	6%
		2. Adagio	172 - 182 (1 before [V] - 2 before [X])	9%
		3. Scherzo	169 - 188 (13 after [F] - 4 after [G])	8%
		4. Finale. Bewegt, doch nicht schnell	[P] - [S]	9%
			[Q] - [S]	2%
	Symphony No.9 in D minor	1. Feierlich, misterioso	268 - 276	2%
Copland	An Outdoor Overture		16 - 34	25%
	Rodeo	Hoe-Down	3 before [22] - End	2%
Cowell	Synchrony		Beginning Cadenza	2%
Debussy	Fetes (Nocturnes: II)		9 before [10] - [11]	2%
			9 after [10] - [11]	6%
			[10] - [11]	4%
	La Mer	1. De l'aube a midi sur la mer	3 before [1] - [2]	4%
		2. Jeux de vagues	[26] - [27]	2%
		3. Dialogue du vent et de la mer	[51] - [58]	2%

Composer	Work	Movement	Passage	Rate
Dvorak	Symphony No.8, Op.88	1. Allegro con brio	16 before [L] - 3 after [L]	4%
		2. Adagio	3 before [E] - [F]	2%
			[E] - [F]	4%
		4. Allegro ma non troppo	Beginning to 18	6%
	Symphony No.9, Op.95		Beginning Theme, 10 - 25	2%
Gershwin	An American in Paris		4 before [46] - 2 before [47]	6%
			5 after [50] - [52]	6%
			Pickup to [57] - [61]	6%
			5 before [46] - [47]	2%
			[57] - [59]	4%
			4 before [46] - [47]	2%
			[63]	2%
	Piano Concerto in F Major	2. Adagio - Andante con moto	Beginning - [10]	2%
			5 to [1]	25%
			5 to 4 after [9]	2%
			[8] - 4 after [9]	4%
Harbison	Concerto for Double Brass Choir & Orchestra	1st Movement	153 - 158	2%
			16 - 21	2%
		2nd Movement	11 - 12	2%
			33 - 35	2%
			42 - 48	2%
Mahler	Symphony No.1	4. Stuermisch bewegt - Energisch	[52] - [56]	2%
			[52] - 4 before [57]	2%
	Symphony No.2	4. Urlicht	Chorale, 3 - 14	4%
		5. Im Tempo des Scherzos	8 before [11] until 5 after [13]	2%

Composer	Work	Movement	Passage	Rate
			9 before [16] - [16]	2%
			12 before [17] - [17]	2%
			8 before [19] - [19]	2%
			[30] - [31], Trumpet 1, in der Ferne	2%
	Symphony No.3	1. Kraeftig. Entschieden	[24] - 5 before [25]	2%
		3. Comodo (Scherzando)	Posthorn Solo (1 before [14] - 3rd of [15])	4%
			Posthorn Solo (1 before [14] - [16])	8%
			Posthorn Solo (1 before [14] - [17])	40%
		6. Langsam - Ruhevoll - Empfunden	Pickup to [26] - [27]	8%
			Chorale (pickup to [26] - [28])	6%
			[26] - End	2%
	Symphony No.4	1. Bedaechtig, nicht eilen	[17] - [18]	2%
	Symphony No.5	1. Trauermarsch. In gemessenem Schritt. Streng. - Wie ein Kondukt	Beginning to 4 after [1]	9%
			Beginning to 6 after [1]	8%
			Beginning to [4]	6%
			[7] - [8]	4%
			[9] - 13 before [11]	2%
			[9] - 6 before [12]	4%
			[10] - 7 before [12]	6%
			Pickup to [13] - [14]	21%
			[18] - [19]	2%
		3. Scherzo. Kraefitg, nicht zu schnell	Beginning to 189	2%
			[13] - 8 after [13]	6%
			389 - 500	2%

Composer	Work	Movement	Passage	Rate
	Symphony No.6	1. Allegro energico, ma non troppo. [...]	[16] - [17]	2%
	Symphony No.7	1. Langsam - Allegro risoluto, ma non troppo	3 before [30] - [33]	4%
			[65] - [66]	2%
		5. Rondo-Finale	5 before [224] - 3 after [224]	6%
			5 after [256] - 1 after [259]	4%
			[276] - [277]	4%
Mussorgsky	Pictures at an Exhibition	Promenade	Beginning - [2]	32%
		6. Samuel Goldenberg und Schmuyle	[58] - 3 after [60]	2%
			[58] - 4 after [62]	6%
		10. La Grande Porte de Kiew	Beginning to [106]	2%
Prokofiev	Cinderella Suite No.1	6th Movement, Cinderella's Waltz	[114] - [121]	2%
		8th Movement	2 before [131] - End	2%
	Symphony No.5, Op.100	1. Andante	[17] - [18]	4%
			[24] - [25]	2%
		2. Allegro marcato	[48] - 10 bars after [49]	6%
			[48] - [50]	2%
			[49] - 4 before [50]	6%
	Violin Concerto No.2	2. Andante assai	[36] - [38]	2%
		3. Allegro, ben marcato	[52] - [53]	2%
			[62] - [63]	2%
Rachmaninoff	Rhapsody on a Theme of Paganini	Variation XIV	[36] - 5 after [38]	2%
	Symphony No.3	3. Allegro - Allegro vivace - Allegro – [...]	3 after [112] - 11 after [112]	2%
Ravel	Alborada Grazioso		[26] - [28]	8%
	Bolero		16 before [6] to [6]	2%
	Piano Concerto in G Major	1. Allegramente	5 after [1] - [3]	17%

Composer	Work	Movement	Passage	Rate
	Rapsodie Espagnole	Movement IV	[2] - [3]	25%
			[24] - [25]	4%
			[34] - End	34%
			[4] - 3 after [4]	2%
			[7] - [8]	2%
			[24] - [25]	2%
Respighi	Pines of Rome	1. Pines of the Villa Borghese	Beginning - [3]	9%
			9 after [2] - [3]	6%
			11 after [2] - [3]	6%
			[5] - 5 before [6]	4%
			[5] - [8]	4%
		2. Pines near a Catacomb	Offstage Solo, 17 - 26	51%
Rimsky-Korsakov	Scheherazade, Op.35	1. The Sea and Sinbad's Ship	[E] - [F]	4%
		2. The Kalendar Prince	9 before [K] - [L]	6%
		3. The Young Prince and the Young Princess	[G] - 1 after [H]	8%
			[G] - [I]	2%
		4. Festival at Baghdad. The Sea. - The Ship Breaks against a Cliff Surmounted - by a Bronze Horseman.	1 before [C] - [D]	21%
			1 before [C] - [E]	11%
			8 after [C] - [D]	2%
			[P] - [U]	2%
			6 before [Q] - [R]	2%
			9 before [Q] - [R]	2%
			[Q] - [U]	8%
			[Q] - [R]	25%
			[T] - [U]	23%

Composer	Work	Movement	Passage	Rate
Schoenberg	Gurrelieder	Part One	Piu stretto after [V] - End	2%
			[W] - [Y]	6%
		Part Three	Beginning at [33]	2%
			Beginning at [25]	2%
	Theme and Variations, Op. 43b		Beginning at [58] (Klaus Narr)	2%
			1 - 21	2%
Schumann	Symphony No.2, Op.61	1. Sostenuto assai - Allego, ma non troppo	264 - 274	2%
			Beginning chorale, Beginning - 14	30%
			Beginning - 2 before [A]	34%
Scriabin	Poem of Ecstasy (Symphony No.4)		13 - 18	2%
			[3] - [4]	2%
			1 after [15] - [20]	2%
Shostakovich	Concerto for Trumpet, Piano and Strings	1. Allegretto	[10] - 3 after [11]	2%
		2. Lento	[34] - [36]	19%
			[34] - [35]	8%
		4. Allegro con brio	[63] - [65]	2%
			[63] - 1 after [65]	2%
			1 after [63] - [65]	9%
			[56] - [57]	4%
	Symphony No.1	2. Allegro	[21] - [22]	2%
		3. Lento	[20] - [21]	2%
		4. Allegro molto	3 before [28] - 11 after [29], Trumpet in F	2%
	Symphony No.5	1. Moderato	[18] - [20]	8%
			[27] - 8 after [28]	2%

Composer	Work	Movement	Passage	Rate
Strauss	Symphony No.8		[27] - 1 after [32]	8%
		4. Allegro non troppo	[108] - [111]	4%
		1. Adagio	[F] - 5 after [G]	6%
		2. Allegretto	[G] - 13 after [G]	6%
		3. Allegro non troppo	18 after [F] - 13 after [H]	6%
	Symphony No.9	3. Presto	[D] - [E]	2%
	Alpine Symphony, Op.64		[68] - [71]	8%
			[75] - [76]	8%
			[91] - 6 before [94]	6%
			[91] - [95]	2%
			[85] - [94]	2%
			[65] to 3 after [67]	2%
			[69] to 4 bars after [70]	2%
			Pickup to [83] to 3 bars before [84]	2%
			[113A] - [114]	2%
			[140] - [142]	2%
	Also Sprach Zarathustra, Op.30		11 after [3] - 19 before [4]	2%
			[18] - [25]	2%
			17 after [50] - [53]	2%
			Beginning - 3 after [1]	4%
			2 after [18] - 4 after [18]	4%
			8 before [51] - 9 after [53]	4%
			8 before [51] - [52]	2%
	Der Buerger als Edelmann, Op.60	3. Der Fechtmeister	Beginning - [38]	2%
		9. Das Diner	[104] - End	2%

Composer	Work	Movement	Passage	Rate
	Der Rosenkavalier Suite, TrV 227d		[55] - 3 before [61]	2%
	Don Juan, Op.20		5 after [F] - 3 before [G]	11%
	Don Juan, Op.20		8 after [H] - [K]	9%
			2 before [Q] - [Q]	4%
			8 after [S] - 3 after [U]	2%
			7 after [Z] - 5 after [Aa]	2%
	Don Quixote, Op.35		[3] - 4 before [4]	8%
			Pickup to [36] - [38]	2%
			4 bars after [36] - [38]	2%
			[43] - [47]	2%
			4 before [61] - 5 after [62]	2%
			3 before [67] - [69]	6%
			[69] - [72]	2%
			3 after [77] - 2 before [78]	2%
	Ein Heldenleben, Op.40		[42] - 1 after [43], 1st Bb part	4%
			7 before [50] - [51], 1st Eb part	4%
			7 before [50] - [55], 1st Eb part	9%
			[54] - [55]	4%
			[58] - 3 after [61], 1st Bb part	8%
			[58] - [64], 1st Bb part	2%
			[65] - [66], 1st Eb part	6%
			[67] - 4 after [73], 1st Bb part	8%
			[67] - [75], 1st Bb part	2%
			2 after [75] - 1 after [77], 1st Bb part	2%
			[78] - [80], 1st Eb part	2%

Composer	Work	Movement	Passage	Rate
			[80] - [83], 1st Bb part	11%
			[81] - [82], 1st Eb part	2%
			[81] - [83], 1st Eb part	4%
	Symphonia Domestica, Op.53	4. Finale	[89] - [91]	4%
			[89] - [90]	2%
	Till Eulenspiegel, Op.28		[27] - 8 after [28]	2%
			[35] - [38], 3rd Trumpet	8%
			[36] - 16 after [37]	2%
			[36] - [38]	2%
Stravinsky	A Soldier's Tale	The Royal March	Beginning - [6]	2%
			[1] - [3]	2%
	Petrouchka (1947 version)	Tableau II: Petrouchka's Room	[116] - [119]	2%
		Tableau III: The Moor's Room	1 before [134] - [139]	57%
			1 before [134] - 3 after [157]	2%
			1 before [134] - [167]	6%
			Pickup to [135] - 7 after [138]	4%
			Pickup to [135] - [139]	2%
			[140] - 6 before [142]	2%
			Valse 1, [140] - [143]	43%
			Valse 2, [149] - [151]	25%
			7 after [151] - [158]	2%
			[155] - [158]	2%
		Tableau IV: The Shrovetide Fair - (Toward Evening)	Masqueraders, [252] to End	6%
			Masqueraders, [265] - [267]	13%
			[265] - End	8%

Composer	Work	Movement	Passage	Rate
	Song of the Nightingale		3 after [22] - [23]	2%
			[68] - 5 after [70]	2%
			5 after [96] - End	2%
	The Firebird	Danse Infernale	Beginning - [6]	2%
			[1] - [3]	2%
			[9] - [14]	2%
			3 before [10] - 2 after [11]	2%
		Finale	[17] - End	2%
Tchaikovsky	Symphony No.4, Op.36	1. Andante sostenuto	Beginning - [A]	2%
		3. Scherzo: Pizzicato ostinato	170 - 211	4%
		4. Finale: Allegro con fuoco	188 - 207	4%
Wagner	Goetterdaemmerung, WWV 86D	Siegfried's Funeral March	[38] - [39]	2%
			[42] - [44]	2%
			2 before [74] - End	2%
	Overture to Tannhaeuser, WWV 70		Final Chorus	2%
			1 before [M] - End	6%
			1 before [H] - End	2%
	Parsifal, WWV 111	Prelude	9 after [1] - 5 before [2]	6%
			9 after [1] - 6 before [3]	15%
			9 after [2] - 5 before [5]	6%
Webern	Passacaglia, Op.1		1 before [1] - 4 before [2]	2%
			3 before [6] - 3 after [7]	2%
			[9] - 7 after [9]	2%
			1 after [12] - 1 before [13]	2%
Williams	Summon the Heroes		Pickup to 33 - 50	2%

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